DOCUMENT RESUME

ED 036 886 EA 002 725

TITLE	Feasibility of Rescheduled School Year Plans for Delaware Public Elementary and Secondary Schools.
INSTITUTION	Delaware State Dept. of Public Instruction, Dover.
SPONS AGENCY	Delaware State Board of Education, Wilmington.; Research for Better Schools, Inc., Philadelphia, Pa.
PUB DATE	May 69
NOTE	48p.
EDRS PRICE	EDRS Price MF-$0.25 HC-$2.50
DESCRIPTORS	Annotated Bibliographies, Case Studies (Education), Elementary Grades, *Extended School Year, *Feasibility Studies, Instructional Programs, *School Calendars, *School Schedules, Secondary Grades, Summer Programs, *Year Round Schools
IDENTIFIERS	Delaware

ABSTRACT

A study team for the Delaware Department of Public Instruction sought to discover a rescheduled school year design that could be adopted and used to increase the efficiency of staff and school facilities in Delaware. Through a search of the literature, visits to three school districts, and a conference with a nationally recognized consultant, recommendations were made. Pilot programs were suggested for selected Delaware school districts to test the feasibility of two rescheduled school year plans: (1) at the elementary level, an extended term of approximately 200 days for all students to give more flexibility in the instructional program and to improve pay and status for teachers; (2) at the secondary level, a voluntary summer session to increase educational opportunities for students to make up work, accelerate their progress, or broaden their studies without the expense of revising school organization and curriculum. It was recommended that pilot projects be funded in equal amounts from State, ESEA Title III, and local sources. An annotated bibliography of 91 citations is included. (LN)

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ED036886

FEASIBILITY OF RESCHEDULED SCHOOL YEAR PLANS FOR DELAWARE PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Delaware State Department of
Public Instruction
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Research and Publications
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EA 002 725

preface

The Research Division of the Delaware Department of Public Instruction in cooperation with Research for Better Schools, Inc., the regional educational research laboratory for Delaware, New Jersey, Pennsylvania, initiated this feasibility study in October 1968.

Research for Better Schools, Inc. was interested in field testing "the administering for change process" utilizing a Research Implementation Team in Education (R.I.T.E.). The Department of Public Instruction's Administrative Council chose the topic, rescheduled school year, as the main concern for the team.

The first phase of the project was completed in May 1969 and this publication presents the group's efforts.

Mr. Carston R. Wagner, Project Coordinator and Supervisor of Research Planning and Development, deserves the highest praise for coordinating and planning the project. Mrs. Coral Lee Watson, Specialist in Research Planning and Development, did an enormous amount of work in obtaining information, compiling an annotated bibliography, and writing a large portion of the report. Mrs. Elsie Craft, the Unit's very capable secretary, provided invaluable secretarial assistance. Mr. Donald Vansant served as coordinator of the project a short time before accepting employment in New Jersey. Mr. James Hazel of the Public Information Section assisted in the publication process in preparing this report.

It is anticipated that the report will provide decision makers with relevant information for sound decisions in this important area of concern.

Wilmer E. Wise,
Director of Research.

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Introduction

Background and Need for Study

The school calendar as it exists throughout most of America today developed in response to the changing needs of a growing and changing nation. Because the United States was for many years primarily a nation of farmers, the demands of agriculture dictated the shape of the school calendar. School was conducted during the winter months, when other activities were at a lull and manpower could be spared for teaching -- and learning. With the spring, male teachers and pupils headed for the fields; sometimes they were replaced by female teachers who taught girls and very young children during the summer months.

At the same time, however, many cities conducted school virtually year-round. In the middle of the nineteenth century, Buffalo was operating its schools throughout the whole year; Baltimore and Cincinnati schools remained open for 11 months; New York conducted a 49-week school year and Chicago, a 48-week school year. These "extended school years" generally were divided into four 12-week terms, with vacation periods at Christmas and for a few weeks during the summer.[1]

The length of the school year gradually became more uniform across the country, as urban districts reduced the length of the school year and rural districts lengthened the school year. By approximately 1915, the nine-month school year had become the norm in most parts of the nation.

It should be pointed out that the 180-day school year, which is still used in most parts of the United States, is below the average when compared with the school years used in other countries. Figure 1[2] shows that many nations employ a school year substantially longer than the 200 to 210-day calendar proposed by advocates of an extended school year for the United States. Children attend these schools virtually year-round with no observable ill effects upon their health or their ability to learn.

While the school calendar has remained constant at about 180 days for the last 50 years, it has been the subject of much discussion. During the 1920's and 1930's, and again in the years just after World War II, the possibility of extending the school year or changing the attendance pattern in some way received wide attention. The last few years have seen a revival of this interest, and at the present time articles about the school year and proposals for changing it abound.

What accounts for this continuing interest in rescheduling the school year? It may be seen perhaps as the result of several pressures:

1) The pressure of people

As the Nation's population continues to boom, schools feel the pinch of swelling attendance rolls. Teacher shortages develop, classrooms become crowded, and a host of related problems develops.

2) The pressure of prices

The cost of quality education, with its emphasis on highly qualified personnel, diversified programs, and technological aids, continues to rise, and taxes rise with it. Taxpayers who are asked to support programs for building new facilities and for strengthening the instructional staff and resource materials ask whether existing staff and facilities are being used as efficiently as they might be.

1. NEA Research Division, *The Rescheduled School Year,* Research Summary 1968-S2 (Washington, D.C.: National Education Association, 1968), p. 6.
2. Thomas, George I., *Setting the Stage for Lengthened School Year Programs* (Albany, New York: New York State Education Department, 1968), p. 9.

3) The pressure of program

The much-publicized "information explosion" has prompted many to ask whether the schools can teach the expanding body of knowledge and prepare students for life in a complex technological society within the confines of the traditional school year.

Increasing numbers of educators and laymen, therefore, are asking whether it is not time to reappraise the design of the school year. They question the efficiency of utilizing school staff and facilities only part time, even though teacher and classroom shortages exist; they challenge the soundness of a system that seems to confirm the notion that learning begins in September and ends in June. Educational, political, and lay leaders in Delaware have voiced a concern in this matter. The concern has sprung from the recognized need to make education more relevant to individual, community, and societal needs; to provide enriched programs of quality education; to bring about more efficient and economical use of staff and space. Last year this concern was crystallized into action to the extent that permissive legislation for extending the school year was introduced and passed in one house of the State Legislature.

The State Department of Public Instruction, through a grant from Research for Better Schools, Inc. (RBS), has responded by establishing within its Research and Publications Division the Planning and Development Unit to focus on this problem. The Planning and Development Unit operates through an agreement whereby RBS finances a problem-centered activity in exchange for the opportunity to monitor efforts of the study group involved in the activity. RBS is gathering information in this manner to help achieve an RBS objective of developing self-instructional kits for change agents.

FIGURE 1
COMPARATIVE LENGTH OF THE SCHOOL YEAR IN REPRESENTATIVE COUNTRIES OF THE WORLD

Name of Country	*Number of Elementary School Days*	*Number of Secondary School Days*
China	252	240
Austria	240	240
Czechoslovakia	240	240
Denmark	240	240
Venezuela	236	236
U.S.S.R.	228-234	228-234
Germany (West)	233	233
Netherlands	200-240	233
Norway	228	228
Poland	220	220
Rumania	216	222
Sweden	214	214
Australia	213	213
Japan	210	210
Greece	210	190
India	200	200-210
Finland	200	185
France	185	185
United States	180	180
Ecuador	170	165
Italy	154	154

Introduction

Statement of the Problem

In brief, the study team sought to determine whether there exists within rescheduled school year plans a design or designs that could be adopted or modified for utilization in Delaware, to provide improved educational opportunities for children while providing for more efficient use of staff and space.

Definition of Terms

Rescheduled School Year: Any deviation from the traditional September to June, 180-day school year.

Staggered Attendance: A plan for rescheduling the school year whereby part of the school enrollment is on vacation at all times.

Summer Program: A plan for rescheduling the school year that utilizes the summer months for additional instruction time.

Extended Term: A rescheduled school year plan whereby extra days are added to the traditional 180-day year for all students.

Improved Educational Opportunity: Flexibility in the program that allows for individualization of instruction; opportunity is provided for remedial and makeup work as well as for in depth study in areas of high student interest.

Efficient Use of Staff and Space: Facilities are not idle for long periods of time; staff is engaged in educational activity for at least eleven months out of the year.

Limitations of the Study

The procedures used were limited to a review of the literature, visits to three school districts with rescheduled school year plans in operation, and a conference with one nationally recognized consultant.

General Procedures

The study design involved four basic steps:

1) A statement of educational need was obtained from the State Superintendent and the Administrative Council. They indicated the need to determine whether a rescheduled school year could secure both educational and economic advantages for Delaware.
2) The problem was limited to manageable boundaries by the decision to seek a rescheduled school year plan already in existence that would be feasible for adoption in Delaware and that would bring about both educational and economic benefits.
3) Alternate strategies for solving the problem were determined by a review of existing literature, contact with specialists in the field, visitations to ongoing programs, and correspondence with other states to determine what plans had been developed.
   a) Review of the literature

      A communication to the Educational Research Service of the National Education Association led to receipt of a bibliography on the rescheduled school year and some materials providing an overview of the field. This bibliography was the starting point for library research, primarily at the University of Delaware. *The Education Index, Readers' Guide to Periodical Literature, Dissertation Abstracts,* and card catalog were used to expand the bibliography and locate data concerning rescheduled school year plans. The ERIC indexes, *Research in Education* and *Pacesetters in Innovation,* were also consulted, and relevant ERIC documents were scanned.

   b) Contact with specialists in the field

      A member of the study group met with Dr. George I. Thomas, Coordinator for Rescheduling the School Year, New York State Education Department. Dr. Thomas, who with his staff recently completed a five-year study of the rescheduled school year, discussed various calendar designs, and their implications for curriculum development.

   c) Visitations to ongoing programs

      Members of the study team visited three districts which have taken different approaches to rescheduling the school year. Visits were made to Atlanta, Georgia, which has adopted a modified four-quarter design; Millville, New Jersey, which has instituted an independent summer program; and Hayward, California, which is piloting a continuous quadrimester plan.

   d) Correspondence with other states

      Inquiries and follow-up letters were sent to state departments of education and to individual districts in states which were mentioned in the literature as having done some work in the area of school calendar design.
4) The most feasible strategy was selected on the basis of an analysis of the data gathered in the literature review, cost analyses of promising plans, and judgments of the study team, reflecting their educational experience and knowledge of the Delaware educational system.

Findings

A review of the literature reveals the existence of many designs for rescheduling the school year. These may be divided into three major categories: plans which call for staggered attendance, plans which emphasize a separate summer program, and plans which add days to the regular school year. In the pages that follow, each approach will be examined and analyzed with regard to its potential for educational opportunities and for economy, on the basis of the literature review.

Staggered Attendance Plans

The calendar designs which involve staggered attendance divide the school year into a certain number of terms. The student enrollment is divided into the same number of groups. One group vacations during each term, so that at any one time only a certain percentage of the students is in attendance. A number of staggered attendance plans have been developed, though only a few of these plans have been tested.

The Rotating Four-Quarter Plan

Perhaps the most well-known all-year school plan has been the rotating four-quarter plan. Under this plan, the school year is divided into four equal quarters of approximately twelve weeks each. Each student attends school for three consecutive quarters and vacations during the fourth quarter. The student enrollment is divided into four equal groups, with one group beginning its school year each quarter. While this plan does not extend the school year for the student, who spends approximately the same amount of time in school as he did under the traditional September to June arrangement, it does mean that school is in operation all year and that school facilities are utilized year-round. Figure 2[3] illustrates how this plan works.

FIGURE 2
OPERATION OF
THE ROTATING FOUR-QUARTER PLAN

Pupil attendance group	*Attendance Quarters*			
	Fall	*Winter*	*Spring*	*Summer*
Group A	Vacation	School	School	School
Group B	School	Vacation	School	School
Group C	School	School	Vacation	School
Group D	School	School	School	Vacation

The Five-Term Plan

A variation of this plan is the five-term plan proposed by the Tucson, Arizona, Citizens' Committee. The five-term plan differs only in that the school year is divided into five terms rather than four and the student body into five groups rather than four.[4] The school year for each student is thus slightly longer than it would be under the four-quarter plan.

The Twelve-Four Plan

The "twelve-four" plan, proposed by the Montgomery County, Maryland, schools divides the student body into four groups and has a group of students beginning school every four weeks. Students have twelve weeks of school and then four weeks of vacation year-round. In this way the number of students in attendance at any one time is still

3. NEA Research Division, *The Rescheduled School Year,* Research Summary 1968-S2 (Washington, D.C.: National Education Association, 1968), p. 10.
4. Tucson Citizens' Committee, *Tucson Citizens' Committee Report on the Year Round School* (Tucson, Arizona: Board of Education, 1960), p. 13.

only 75 percent of the total enrollment, but each student vacations during several seasons of the year.[5]

The Sliding Four-Quarter Plan

Andrew Adams has proposed a "sliding" four-quarter plan which also divides the school year into four equal quarters and the student enrollment into four equal groups. One-fourth of the students in each grade begin school each quarter. They attend *four* consecutive quarters, however, and then vacation one quarter. In this way, a student takes each long vacation at a different season of the year.[6]

The Pupil Rotation Plan

A pupil rotation plan proposed by W. Scott Bauman uses an eleven-month school year based on a quarterly calendar. All students vacation during the month of July. The enrollment is divided into four groups; each group attends school for six consecutive quarters and then vacations for two quarters. Students thus would take their long (six months) vacations at different times of the year; these long vacations, however, would occur only every other year.[7]

Is The Staggered Attendance Approach Feasible?

Beginning in 1904, there has been some experimentation with staggered attendance plans and a great deal of discussion about this general approach. Between 1904 and 1956, at least fifteen cities tried the rotating four-quarter plan; all of these communities subsequently abandoned the plan and returned to a traditional school calendar. Since 1950 a number of cities have considered the feasibility of adopting a staggered attendance plan. Studies have been conducted in Tucson, Arizona; Long Beach, Los Angeles, Redwood City, Sacramento, and San Juan, California; Fairfield, Connecticut; Polk County, Florida; Atlanta, Georgia; Cook County, Illinois; Montgomery County, Maryland; Cincinnati and Cleveland, Ohio; and Dallas and Houston, Texas. With the exception of Atlanta, none of these communities has adopted a staggered attendance plan, finding that the approach has more disadvantages than advantages, To quote the Florida Educational Research and Development Council:

> "No plan of staggering the school term where part of the children are on vacation all the time and part in school all the time, will save money. Such plans also are likely to lower the quality of education. Plans of this type also encounter strenuous parental opposition and involve school authorities in enormous administrative difficulties. Wherever such plans have been tried, they have been abandoned."[8]

Two major problems have become evident whenever the staggered attendance approach has been tried or considered. One of these is an administrative problem: the approach requires a minimum enrollment. In this approach, each school actually is divided into several smaller schools (four smaller schools in the case of the rotating four-quarter plan), each with its own staff and schedule. To maintain a class size of

5. Montgomery County Public Schools, *The Twelve-Four Plan* (Montgomery County, Maryland: Montgomery County Public Schools, 1960) p. 1.
6. Adams, Andrew, "Look Hard at This Year-Round School Plan", *American School Board Journal*, July 1968, p. 12.
7. Bauman, W. Scott, *The Flexible System: An Economic Analysis of Advantages of the Quarterly Calendar in Public Schools* (Toledo, Ohio: University of Toledo, 1966), p. 23-24.
8. Florida Educational Research and Development Council, *Year-Round Schools for Polk County, Florida: A Feasibility Study* (Gainesville, Florida: University of Florida, 1966), p. 63.

approximately thirty pupils and to have one teacher per grade section, an elementary school on the rotating four-quarter plan must enroll 720 pupils, with an equal number of pupils at each grade level, and must employ 24 teachers. Similarly, to maintain a pupil-teacher ratio of 30:1 and to offer a school program of minimum quality, a junior high school on the same plan must enroll 1,500 pupils; a senior high school, 2,400 pupils.[9] If a school does not have this minimum enrollment, combined classes and uneconomically small classes may result.

Since, then, a staggered attendance plan divides a school into several schools, the burden on administrators will be greatly increased, with enrollments, scheduling, graduations, and so on, occurring several times each year.

The second problem area is public resistance to the staggered attendance approach. This resistance centers around the arbitrary assignment of vacation periods which is a basic feature of the approach. Family vacation patterns are disrupted, and many children are assigned nonsummer vacations. Community resistance has blocked adoption of a staggered attendance plan in some communities and has been instrumental in the failure of such plans in other communities.

Can Staggered Attendance Plans Provide Enriched Educational Opportunities?

The literature provides no evidence that the staggered attendance approach carries with it clear-cut educational advantages. The student receives no additional instructional time. There is no opportunity for acceleration or enrichment; in fact, since school facilities are in use year-round, they are denied to vacationing students, who are no longer able to use the summer to take additional courses. Advocates of this approach do make some claims concerning educational benefits to be derived from it. They point out that this plan does provide an immediate easing of overcrowded conditions and that it can be a means of reducing the teacher-pupil ratio (provided that the faculty is not reduced proportionately or itself employed on a staggered basis). Moreover, they point out that with fewer teachers required at any one time, schools could be more selective in hiring teachers, with a resulting upgrading of the quality of instruction. At the same time, it would become easier to attract top-flight people to the teaching profession as teacher status and pay improve with the full-time employment this approach makes possible. This last is also true of other approaches to rescheduling the school year, however, and cannot be seen as an advantage peculiar to the staggered attendance approach.

Evaluation of these claims is made difficult by the absence of valid data to support them. While there was some experimentation with staggered attendance plans in the twenties and thirties, there is little in the way of systematic evaluation of these trials. Emphasis was placed on the economic aspects of the experiments; what attention was given to their educational results centered on "demonstrating" that the approach was not detrimental to students' ability to learn rather than showing any significant gains attributable to the new calendar design. In other words, the reports emphasized the absence of regression instead of the presence of progress.

Can Staggered Attendance Plans Provide For More Efficient Use of Staff and Space?

Historically, the staggered attendance approach has been looked to and tried as an economy measure. At first glance

9. NEA Research Division, *op. cit.*, p. 10-11.

it appears to promise much in the way of efficiency and economy. School buildings and other facilities are used year-round, eliminating the present waste during the summer months. Theoretically, the capacity of existing buildings is increased by a certain percentage, depending on the specific plan adopted (in the case of the four-quarter plan, capacity is increased by 33 1/3 percent). This means that savings can be realized in the areas of school construction, debt service, insurance premiums, and operating and maintenance costs for new buildings that will not be needed. Also, at any one time fewer books and less equipment are needed, and the size of the teaching staff can be reduced. Thus Aliquippa, Pennsylvania, which adopted the rotating four-quarter plan in 1928, reported savings of $282,000 over a seven-year period.[10]

The literature reveals conflicting opinions regarding whether the staggered attendance approach can in fact achieve economies. Some studies show that staggered attendance plans actually increase operating costs and can prove to be more costly than continuing with the traditional school year and constructing new buildings as needed. In many parts of the country, air-conditioning is required to make summer classes workable; this, of course, introduces an additional expense. With school in operation year-round, the cost of maintenance increases, and it is difficult to schedule major maintenance work. Many jobs will probably be done at night or on weekends, which means extra expense. With school buses in use year-round, maintenance work and major overhauls of the buses become difficult to schedule. Textbooks and other school supplies can also be expected to wear out more quickly from continuous use. Quoting again from the Florida Educational Research and Development Council:

> "The only feasible all-year school plans yet developed for reducing school costs involve all the pupils attending school for an extended school year and the acceleration of pupils in order to reduce enrollment."[11]

The difference of opinion regarding the effectiveness of the staggered attendance approach as a means of reducing costs can perhaps best be illustrated by looking at three cost analyses which were done to predict expenditures under staggered attendance plans. W. Scott Bauman of the University of Toledo (Ohio) estimates that with the rotating four-quarter plan total expenditures could be *reduced* by 11.8 percent.[12] In considering the feasibility of year-round schools for Polk County, Florida, the Florida Educational Research and Development Council estimates that the rotating four-quarter plan would *increase* total expenditures by 25.2 percent.[13] In a study undertaken at the request of the Tucson, Arizona, Citizens' Committee on the Year-Round School, the University of Oregon Educational Research Bureau estimates that adoption of the five-term plan would *increase* total expenditures by 6.7 percent at the elementary level and 15.4 percent at the secondary level.[14]

In light of the conflicting reports on the economic advantages of the staggered attendance approach and the generally speculative nature of the discussion concerning it, it seems reasonable to conclude that there is no sound basis for regarding this approach as an economic cure-all. Only experimentation with the approach, with careful evaluation of the results, will determine whether the advantages often ascribed to it can be realized. As has already been noted, however, several difficulties arise when the feasibility of the approach is considered; these difficulties, together with the

10. Wilson, Lytle M., *The All-Year School in Aliquippa* (Aliquippa, Pennsylvania: Aliquippa Public Schools, 1958), p. 3.
11. Florida Educational Research and Development Council, *op. cit.*, p. 63.
12. Bauman, W. Scott, *op. cit.*, p. 16.
13. Florida Educational Research and Development Council, *op. cit.*, p. 36.
14. Tucson Citizens' Committee, *Summary of the Study Made by the Bureau of Educational Research on the Year-Round School and Building Costs*, Tucson, Arizona, 1962, p. 4.

uncertain benefits of the approach, raise questions about the desirability of adopting a staggered attendance approach even on an experimental basis.

In this section the staggered attendance approach has been discussed as an economy measure. It should be pointed out that "more efficient use of staff and space" does not necessarily mean simply cutting costs. Instead, emphasis should be placed on securing better returns for money spent, on spending money wisely rather than spending money grudgingly. It has already been noted that the educational advantages of the staggered attendance approach are questionable. Since this is the case, this approach cannot be considered to provide for more efficient use of staff and space simply because it may result in small dollar savings.

Summer Program Plans

Like the staggered attendance plans, summer programs place school operations on a year-round basis. Their primary objective is a different one, however; whereas the staggered attendance plans seek economy, summer programs are geared to improving the educational program by offering additional opportunities for recreation, enrichment, remediation, makeup work, and acceleration and by reducing summer forgetting.

Many communities throughout the Nation have long conducted summer sessions. These sessions usually are financed by the school district or by tuition, or sometimes by both. Attendance generally is voluntary, and classes are held for six to eight weeks.

Recently, however, the summer session has been receiving new attention as a means of expanding the offerings of the traditional school year and as a possible stepping-stone to a full-fledged extended school year program. Three distinct types of summer programs are currently being used or advocated.

The Summer Program as an Extension of the Regular School Year

One type considers the summer program as an extension of the regular school year. In the Modified Summer School Plan developed by the New York State Education Department, for example, new academic courses are offered for credit during a seven or eight-week summer session. Students are able to complete at least one full-year course during the summer by attending class 3½ hours a day. The courses selected are designed to allow students ultimately to do from four to six years of work in one calendar year less.[15] After the Modified Summer School Plan has been operating for about five years, there will be a reduction in the total student enrollment.

The Independent Summer School

A second variety of summer program emphasizes an independent summer school with offerings and atmosphere different from those of the regular academic year. This sort of program aims at enrichment rather than acceleration and sometimes includes camping experiences and field trips as well as classroom instruction.

A great many communities have initiated independent summer programs. In Millville, New Jersey, for example, a summer program geared especially to elementary pupils was begun in 1968. Three 3-week sessions were scheduled between June 24 and August 23, with classes running from 9 a.m. until 3 p.m. The program emphasized enrichment, recreation,

15. Thomas, George I., *Extended School Year Designs* (Albany, New York: New York State Education Department, 1966), p. 67.

and remediation; classes were offered in the areas of music, arts and crafts, foods, clothing, shop, reading, library, language, science, math and recreation.

Extended Contracts for Teachers

A third type of summer program is based on extended contracts for teachers. Teachers are offered eleven or twelve-month contracts and spend the summer months in any of a number of activities. For example, in Rochester, Minnesota, which initiated an eleven-month contract plan in 1946, teachers may spend their summers teaching in summer school; working in the community recreation program; participating in workshops, curriculum studies, or seminars; working on local studies and research projects or on individual projects; or engaging in travel of professional significance.[16] A similar plan in Glencoe, Illinois, also begun in 1946, offers teachers twelve-month contracts. Summer activities are similar to those in Rochester, and every fourth summer a teacher may take leave with full pay, with no scheduled assignments.[17]

Another Summer Plan

Still another summer plan has been proposed to extend the use of school facilities and at the same time enrich educational opportunities. This plan calls for double sessions during the regular school year plus a summer enrichment program. At the present time there is no record of experimentation with this plan.

Is The Summer Program Approach Feasible?

Of the three general approaches to rescheduling the school year, the summer program approach probably can be implemented most easily. There are several reasons for this. The first and most important is that summer school is not an innovation; the public is accustomed to the idea of summer sessions of one sort or another, and every year more school districts open their doors to summer students. Furthermore, since attendance at summer school generally is voluntary, and since the summer session does not usually run for the full summer vacation period, family vacation patterns are not disrupted, as they are in the staggered attendance approach. Also, there is little difficulty in maintaining school buildings, since the entire school plant is not required for summer classes.

Can Summer Programs Provide Enriched Educational Opportunities?

While the specific educational benefits will vary depending upon what sort of summer program is instituted, the summer program approach generally provides an opportunity to make the instructional program more flexible.

The extra learning time provided by the summer session may be used in a number of ways. It may be used for enrichment purposes, so that students may broaden or deepen their studies, taking courses which might not fit into their regular school year schedules. It may be used for remediation; students with learning disabilities and students from disadvantaged backgrounds may benefit especially from the additional schooling they receive during the summer session. It may allow students to accelerate their progress through

16. Educational Research Service, "Extended-Year Contracts for Teachers", *ERS Reporter*, September 1964, p. 3.
17. *Ibid;* p. 2.

school, possibly saving a year's schooling out of the traditional thirteen years. It may be used to permit students to make up work which was failed or missed through absence.

Summer sessions offer obvious advantages for teaching in some areas. The science teacher could emphasize nature study; the art teacher, outdoor sketching and painting; the physical education teacher, instruction in swimming, baseball, and other summertime sports; the language arts teacher, attendance at summer stock performances and various workshops, and so on.

The summer program also serves to lessen summer forgetting and to reduce the need for subsequent readjustment, reteaching, and review.

Can Summer Programs Provide For More Efficient Use of Staff and Space?

With the traditional September to June school calendar, teachers are part-time professionals. During the summer months their professional skills are wasted or only partly utilized. The summer program approach has the great advantage of making possible the employment of teachers on a year-round basis. This means that the community can draw more deeply upon a valuable resource - the training and interest of its teachers.

This will be especially true when a summer school program is coupled with extended contracts for teachers. With such an arrangement, teachers may teach half a day and spend the remaining time working on curriculum, reviewing new teaching methods and tools, and so on. This sort of work could have a great impact on the quality of instruction and program during the regular school year as well.

A summer program also utilizes buildings that otherwise lie idle during the summer months. Since the summer sessions normally involve only part of the total school enrollment, the entire school plant is not required, and summer maintenance work can be carried on with few problems.

The summer session obviously increases total educational costs. (Estimates of the increased costs are provided in the case study included in Appendix A.) Since the program is usually optional, it is possible that only a small percentage of the student population may choose to participate. If this happens, the return on the added investment may be so small that the program cannot be called efficient.

It would seem, therefore, that the summer program can provide for more efficient use of staff and space provided that the offerings of the program attract a healthy percentage of the total student enrollment to the summer sessions. This underlines the importance of the program content; it is not so much the extra time provided as it is what is done with that time that can make the summer school a valuable addition to the overall school program.

Extended Term Plans

In the current wave of interest in rescheduling the school year, the plans receiving most attention are those which extend the regular school year. New York State has led the way in exploring the possibilities opened by adding days to the school year. A five-year study in that state, under the leadership of Dr. George I. Thomas, has resulted in the development of a number of extended school year designs.

The Continuous School Year or Continuous Progress Plan

One of the New York plans for extending the school year is the continuous school year or continuous progress plan, which provides for a school year of from 200 to 240 days. Because of the additional days' schooling received each year, students of average or superior ability could complete six or seven years' work in one year less, while slower students could use the extra learning time to strengthen their skills, completing the work in the usual time. The continuous progress plan obviously would accommodate a nongraded program but could also be used in a traditional structure, with the curriculum redistributed over, for example, six extended years instead of seven shorter ones. The plan is most often discussed as being appropriate for elementary schools, but its advocates maintain that it could be used in the secondary schools as well. Figure 3[18] illustrates the working of the continuous progress plan.

FIGURE 3

The Continuous School Year or Continuous Progress Plan

First year -- learning level 1	Kindergarten 180 days	Grade 1 30 days
Second year -- learning level 2	Grade 1 150 days	Grade 2 60 days
Third year -- learning level 3	Grade 2 120 days	Grade 3 90 days
Fourth year -- learning level 4	Grade 3 90 days	Grade 4 120 days
Fifth year -- learning level 5	Grade 4 60 days	Grade 5 150 days
Sixth year -- learning level 6	Grade 5 30 days	Grade 6 180 days

The Trimester Plan

A second extended school year design is the trimester plan, in which the school year is divided into three equal terms of 68-75 days each. (The New York State Education Department recommends a 210-day school year, with 70-day trimesters.) The extra time thus added to the school calendar may be used in a variety of ways. It may be used to broaden the students' educational experience or to deepen the students' experience in any given field. It also provides the opportunity for acceleration, as seen in the New York plan, under which not only is the school year extended, but the class period is also lengthened slightly. With this increase, two trimesters provide the same amount of instructional time as two regular semesters. A course is completed in two trimesters, and new courses are begun in the following trimester.[19] This trimester plan may be adapted to include grades 7-12, 8-12, or 9-12, and will save one year of schooling out of six, five, or four (depending on the number of grades included in the plan). Figure 4[20] shows the operation of a three-year trimester plan for grades 9-12; with this plan, a full four-year program, plus one extra term ("E" term) to be used for enrichment, remediation, vacation, etc., can be completed in three years.

According to the New York study group, after this plan has been in operation for four trimesters, one full class will

18. Thomas, Extended School Year Designs, p. 20.
19. Thomas, *Extended School Year Designs*, p. 27.
20. *Loc. cit.*

be eliminated, so that savings in space and teachers will be realized.

The Split-Trimester Plan

A modification of the trimester plan has been developed by the New York State study group. Known as the split trimester plan, it combines features of the regular trimester plan and the traditional summer school. A lengthened school year is divided into two trimesters of approximately seventy days each and a third trimester split into two sessions, each about thirty-five days in length. Attendance during the first 2½ trimesters is mandatory for all students, but attendance at the last session is completely or partially voluntary, depending on the approach taken by the school district. (The district may specify, for example, that a student must attend a certain number of "extra" split trimester sessions during his secondary school career; a program that is thus only partially voluntary is obviously easier to administer.)

The Quadrimester Plan

Like the trimester plan, the quadrimester plan involves extending the school year to 200-220 days. This lengthened year is divided into four equal terms. If class periods also are lengthened slightly, students of average or superior ability should be able to complete a year's work in three quadrimesters. The fourth quadrimester could be used for acceleration, leading to an eventual reduction in enrollment, as in the trimester plan. The fourth quadrimester could also be used for enrichment or remedial work, so that slower students, working at a pace they find comfortable, could spend the traditional thirteen years in school but finish with a stronger background than they would receive in the traditional program.

The quadrimester program should not be confused with the rotating four-quarter plan described earlier. The two plans are similar in that both divide the school year into four terms, but they differ in several important respects:

1) Under the quadrimester plan, all pupils attend school during all four terms; under the rotating four-quarter plan, pupils attend only three quarters out of four.
2) Under the quadrimester plan, all pupils have a summer vacation, taken at the same time; under the rotating four-quarter plan, one-fourth of the students are on vacation at any given time, and only some of the students vacation during the summer.
3) Under the quadrimester plan, acceleration is possible; under the rotating four-quarter plan, there is no provision for large-scale acceleration.

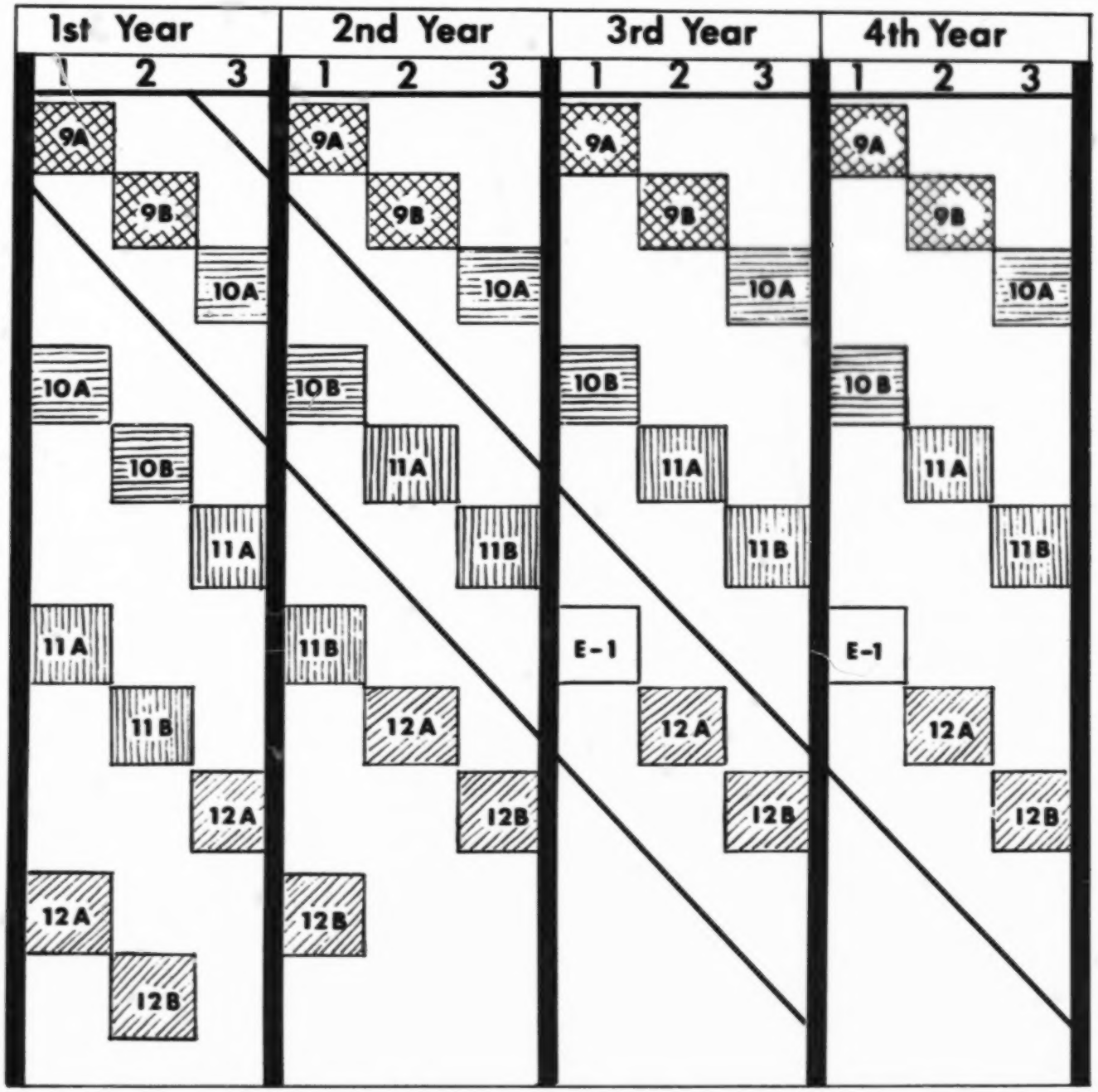
The Extended K-12 Plan

The Extended K-12 Plan is a combination of several of the plans previously described. Its goal is the expansion of educational opportunities at little or no extra cost to the community. This is to be achieved by implementing an extended school year (204 days is the length recommended in the New York plan) at all grade levels. In the lower grades, which are organized into a continuous progress plan, the extra days of schooling are used to strengthen the pupils' skills and to broaden their educational experience. In the upper grades, which use the trimester or quadrimester plan, students will use the extra time to accelerate their progress, saving one year and finishing school in twelve years rather than thirteen. According to the New York report, the following educational advantages may be derived from the Extended K-12 Plan:

"The Extended K-12 Program requires all pupils to attend school for twelve lengthened school years.

FIGURE 4

STUDENT FLOW IN A THREE YEAR TRIMESTER PLAN



Only 4 to 5 years would be used to save the year necessary for the reduction of pupil enrollments and the subsequent potential monetary gains. This will enable the student to engage in a broader program of studies for 7 or 8 years . . .

All pupils can derive educational benefits from the extra year or more of education attainable from the Extended K-12 Program, but the advantage to a potential dropout is especially noteworthy. Figure 5 illustrates how the potential dropout can be at least one step higher when he reaches a legal leaving age. Many young men and women who would ordinarily have been classified as dropouts will graduate under the new program, and others may be so close to graduation that they will elect to remain in school to complete a program study . . .

The longer school year at the primary level can influence pupils' attitudes and behavior for the rest of their lives . . ."[21]

The Multiple Trails Plan

The Multiple Trails Plan differs from the other extended school year designs discussed here in that it deals not only with the amount of time that the school year should contain but also with the way in which that time should be scheduled. The plan extends the school year to eleven months, with July or August remaining a summer vacation for all students and teachers. Winter and spring vacations are also scheduled during the school year.

Extended year programs starting with kindergarten will allow pupils to enter new grades or schools with more instructional days behind them. This should result in their being at higher educational levels than peermates working in regular school year programs. Thus:

1. New fourth graders will have had 100 to 140 extra days of schooling.
2. New sixth graders will have had 150 to 210 extra days of schooling.
3. New eighth graders will have had 200 to 280 extra days of schooling.
4. Potential dropouts electing to leave at age 16 will have had 275 to 385 extra days of schooling.

The second basic feature of the plan is its use of a "multiple modular approach" to teaching. The school day is scheduled into time modules which may be anywhere from fifteen to thirty minutes long. Instructional time allotted under the traditional system is recomputed in terms of these modules, which extend over a longer (210-day) school year. The number of time modules allotted for a class meeting depends on the subject or activity during that meeting. Thus, the meeting may be anywhere from one to six modules long.

This rescheduling, which is designated *Stage I* of the plan, will result in fewer class sessions per week. (Over the extended year, however, instructional time will be equal to that under the present system.) The new weekly schedules of teachers and students will contain unscheduled or "E" time. There will be a similar "freeing up" of classroom space. The manner in which this "E" time and space is used determines which of the multiple "trails" a school will follow. Some schools with the goal of immediate economy may stop at this point (Stage I), with the realization of savings in teacher time and in classroom space.

A school may decide to move on to *Stage II,* which provides for the acceleration of students through secondary school and a resulting drop in the school's total enrollment. This acceleration is achieved by having students use their "E" time

21. Thomas, *Extended School Year Designs,* p. 80, 82.

FIGURE 5[22]

THE EXTENDED K TO 12 SCHOOL YEAR PROVIDES MORE INSTRUCTIONAL DAYS FOR AVERAGE, BRIGHT, AND SLOW LEARNING CHILDREN

Number of Instructional Days Available in Regular and Extended School Year Plans

Grade	Median age of entry into grade	Cumulative number of days of schooling possible in regular school year	Cumulative number of days of schooling possible in extended school year			Cumulative gain in days		
		180 days	*205 days*	*210 days*	*215 days*	*205*	*210*	*215*
K	5-3	180	205	210	215	25	30	35
1	6-3	360	410	420	430	50	60	70
2	7-3	540	615	630	645	75	90	105
3	8-3	720	820	840	860	100	120	140
4	9-3	900	1025	1050	1075	125	150	175
5	10-3	1080	1230	1260	1290	150	180	210
6	11-3	1260	1435	1470	1505	175	210	245
7	12-3	1440	1640	1680	1720	200	240	280
8	13-3	1620	1845	1890	1935	225	270	315
9	14-3	1800	2050	2100	2150	250	300	350
10	15-3	1980	2255	2310	2365	275	330	385
11	16-3	2160	2460	2520	2580	300	360	420
12	17-3	2340	2665	2730	2795	325	390	455
13	18-3	2520	2870	2940	3010	350	420	490

Extended year programs starting with kindergarten will allow pupils to enter new grades or schools with more instructional days behind them. This should result in their being at higher educational levels than peermates working in regular school year programs. Thus:

1. New fourth graders will have had 100 to 140 extra days of schooling.
2. New sixth graders will have had 150 to 210 extra days of schooling.
3. New eighth graders will have had 200 to 280 extra days of schooling.
4. Potential dropouts electing to leave at age 16 will have had 275 to 385 extra days of schooling.

22. *Ibid.*, p. 81.

to take extra courses, thereby finishing their high school studies one year earlier. With the reduction in student enrollment, there are further savings in teacher time and in classroom space.

Stage III of the Multiple Trails Plan involves the use of "E" time and facilities to provide remedial, corrective, and enrichment programs to meet the needs of individual students. While all students may benefit from this stage, it has obvious promise especially for disadvantaged pupils and potential dropouts.

Stage IV, the ultimate goal of the plan, calls for the adoption of a continuous progress plan at the secondary school level. The authors of the plan point out that implementing this stage will require "innovation . . . in teaching techniques, school organizational patterns, and educational philosophy."[23] They suggest that one approach might be the reorganization of the curriculum into resource units with many types of learning experiences, to be completed by students at their own rates of speed. Acceleration would also be possible at this stage.

An Extended School Year with Double Sessions

A final extended school year plan which has been proposed and discussed -- but not tried -- calls for an eleven-month school year and the scheduling of double sessions. Proponents of the plan claim that it would save money by doubling plant capacity, while offering slightly more time in school than pupils receive under the traditional school calendar. They also claim advantages in the areas of curriculum improvement, increased opportunities for individual teacher-pupil contacts, and inservice training for teachers, since teachers would teach for just four hours a day and spend the remaining four hours in preparation, counseling, workshop activities, and so on.

Is The Extended Term Approach Feasible?

The extended term approach is free from some of the administrative difficulties of the two approaches previously discussed. There is no reliance on staggered attendance or on voluntary attendance; all students attend school every day. For this reason such matters as enrollment, scheduling, staffing, and so on, pose no special problems and can be handled as they are for the traditional school year. In addition, an extended term can be adopted by any size school or district; there is no minimum enrollment required.

All of the extended term designs retain the traditional summer vacation (albeit an abreviated one), and so families can still enjoy summer vacations together. Nevertheless, some community resistance to an extended school year may be encountered, since the public will be required to accept a change in the traditional pattern of school attendance. As recently as 1967 a Gallup poll of parents' opinions on the school year showed that nearly seven in ten parents of school children responding reacted negatively to the idea of any reduction in the summer vacation.[24]

Can Extended Terms Provide Enriched Educational Opportunities?

Of the three general approaches to rescheduling the school year, the extended term approach appears to offer most promise with regard to providing enriched educational opportunities. It provides extra instructional time which can be used to follow any of a number of paths - enrichment, remediation, acceleration - and thus introduces the chance for

23. Thomas, George I., *Introducing the Multiple Trails Extended School Year Plan* (Albany, New York: New York State Education Dept., 1968), p. 5.
24. NEA Research Division, *op. cit.*, p. 7.

greater flexibility into the instructional program.

Ideally, the extended term affords a chance to individualize instruction to a greater degree. The child who learns rapidly can accelerate his studies, possibly finishing school a year earlier than he normally would and moving on to advanced studies or to employment. The child who needs more learning time and individual help can spend the traditional 13 years in school but finish with a stronger background and a greater degree of success than he would have under the traditional program. The child with special interests can deepen his studies in these areas without sacrificing other courses to do so.

Like the summer program, the extended school year reduces the long summer vacation and the consequent student forgetting. Much of the time now used for review and reteaching can, therefore, be devoted to new learning.

Unlike the summer program approach, the extended term approach focuses attention on the regular school year and instructional program, providing an opportunity for (perhaps even demanding) a rethinking of school philosophy and a reworking of curriculum. It must be emphasized that extending the school year will not in itself lead to educational benefits. Careful attention must be given to what is done with the extra time. An extended school year offers the opportunity to reshape the instructional program and reexamine the whole approach to education; it is this opportunity that can lead to the educational benefits described above.

Can Extended Terms Provide For More Efficient Use of Staff and Space?

Extending the school year unquestionably involves additional cost, at least during the first few years an extended term is in operation. (Estimates of the additional expenditures for one extended term design are supplied in the case study included in Appendix A.) The additional cost should be considered, however, in light of the increased educational benefits. In other words, while the extended term calls for a greater outlay, it also makes possible a greater return.

The extended term approach provides for fuller utilization of buildings and other school facilities which, under the traditional system, go unused during the summer months. It provides for more efficient use of teachers, whose professional skills are utilized only nine or ten months of the year under the present system. Because the extended term approach makes teaching a full-time profession, it also makes easier the recruitment of outstanding teachers.

The possibility of long-range savings is opened up by the provision for acceleration of many of the extended term designs. If students can finish their schooling in 12 years rather than 13, total school enrollment will eventually be reduced, and savings can be realized in all areas of the educational budget.

Summary

Introduction

For many years there has been concern about the apparent inefficient and uneconomical use of existing school facilities and school staffs. School buildings sit idle for three months each year while many teachers become waitresses, bartenders, farmers or factory workers. In the face of ever rising costs for education, the taxpayer is demanding that educators reexamine the way the tax dollar is being spent.

Statement of the Problem

In brief, the study team sought to determine whether there exists within rescheduled school year plans a design or designs that could be adopted or modified for utilization in Delaware, to provide improved educational opportunities for children while providing for more efficient use of staff and space.

Procedures

The study team sought to answer the above questions by an extensive review of the literature, by visiting school districts where rescheduled school year programs are in operation, and by consultation with authorities in the field.

Findings

The study team found that there exist three basic approaches to rescheduling the school year: (1) staggered attendance, (2) summer term, and (3) extended term.

1) Staggered Attendance

The experiences of those who have tried the staggered attendance approach would seem to indicate this approach to be the least desirable of the three. Such plans are designed primarily to achieve economies, and there is no reliable data to show that educational benefits can be ascribed to them as well. There is some question as to whether these plans do in fact produce significant savings, since cost studies differ in their findings. Perhaps most important, there are factors in staggered attendance plans (e.g., the conflict with family vacation patterns) which make successful implementation of the plans unlikely. The history of experimentation with staggered attendance plans underlines this -- in every community that has tried such a plan, it has eventually been abandoned. The study team therefore rejects this approach as a feasible alternative for further consideration in Delaware.

2) Summer Term

Summer programs have been in existence for many years, traditionally requiring tuition and offering only remedial or makeup work. The summer school as an extension of the regular school year would appear to offer great potential for diversity and flexibility of program, as well as more extensive use of facilities and staff. There has been very little experimentation with summer programs of this sort, however, and more is needed to determine if they offer improved educational opportunities while providing more efficient use of staff and facilities.

3) Extended Term

The extended term plans are presently receiving much attention, and there are several school districts which have such plans in operation at the present time. The extended term approach appears to hold great promise; however, there is very little data available to verify claims of educational or economic advantages. There is a need for further experimentation with extended term plans to find out if they do offer

the educational and economic advantages that their proponents claim.

Further findings indicate that no conclusive research has been conducted to show that there are educational advantages attendant to a longer school year in and of itself, although there is a great body of speculative opinion regarding this matter. There is a growing awareness that attention must be given not only to the design of the school calendar but also to the nature of the instructional program. In other words, there should be definite plans for the use of the extra time afforded by a revised calendar. There is likewise no conclusive research to show economic advantages for an extended school year. Again there has been much speculation concerning this matter, and several cost studies have been done, in some cases with conflicting conclusions.

Recommendations

In light of the findings of this study, it is recommended that pilot programs be implemented in selected Delaware school districts to test the feasibility of the following approaches:

a) At the elementary level, an extended term for all students.

The extended term of approximately 200 days could provide additional instructional time and thus greater flexibility in the instructional program. The extended term could also mean fuller utilization of school staff and facilities and improved pay and status for teachers.

b) A voluntary summer program at the secondary level.

The voluntary summer session could increase educational opportunities without necessitating a major overhaul of school organization and curriculum. Students could be offered the chance to broaden their studies, to accelerate their progress, to take additional work in areas they find troublesome, to make up work they failed or missed because of absence. This program would utilize school buildings and materials which would otherwise lie idle throughout the summer. It would offer summer employment to teachers and be a step toward taking full advantage of their professional skills.

c) Source of funding for recommendations a and b

It is recommended that the pilot projects be funded one third from State Funds, one third from Title III, ESEA monies, and one third from local sources.

Bibliography

Adams, Andrew, "Look Hard at This Year-Round School Plan", *American School Board Journal,* July 1968, p. 11-15.

Proposes "sliding" four-quarter plan with four twelve week quarters, one week's vacation after each quarter. One-fourth of the students in each grade begin each quarter, attend four consecutive quarters, then vacation one quarter. In this way, a student's vacation quarter falls at a different time each year.

Bauman, W. Scott, *The Flexible System: An Economic Analysis of Advantages of the Quarterly Calendar in Public Schools,* Business Research Center, College of Business Administration, University of Toledo, Toledo, Ohio, 1966, 38 p.

Examines an eleven-month school program based on a quarterly calendar. Provides two possible quarterly calendars: The Pupil Rotation Plan, in which students attend six consecutive quarters and then vacation for two quarters, and the Constant Quarter Plan, in which students attend three quarters and vacation the fourth, having the same vacation period every year. The author estimates that total school expenditures could be reduced by 11.8% through adoption of the flexible system and provides detailed financial statistics to support his estimate.

Bauman, W. Scott, "Four-Quarter Plan Uses Schools All Year Long", *Nation's Schools* 80:5, November 1967, p. 69-70

Advocates adoption of four-quarter plan to increase efficient utilization of facilities and personnel and to permit curriculum to meet the needs of the individual. The author's views are defended by Andrew Adams and criticized by Alvin Zachrich.

Berman, Harvey, "Do Our Schools Need More Time?", *American School Board Journal,* November 1957, p. 35-36.

Reviews four extended school year plans: the four-quarter plan, double sessions with an extended school day, an eleven-month plan with double sessions, and an all-year school.

Boodnick, Allan, "Educational Stepchild: Secondary Summer School", *Bulletin of the National Association of Secondary School Principals* 50:308, March 1966, p. 54-59.

Describes voluntary summer school program in Culver City, California, where the summer program is seen as a continuation of the regular year. The author recommends that voluntary summer school be used for experimentation aimed at expanding the traditional school year.

Bullock, Robert P., "Some Cultural Implications of Year-Round Schools", *Theory into Practice* 1:3, June 1962, p. 154-161.

Discusses the four-quarter plan, which the author opposes strongly. The author predicts detrimental effects upon students, school program, and community if the four-quarter plan is adopted. He points out that the primary objective of the plan is not quality education or enrichment, but economy, and emphasizes that under such a plan the school facilities are denied to one-fourth of the students at any given time.

Cammarota, Gloria; Stoops, John A.; Johnson, Frank R., *Extending the School Year,* Association for Supervision and Curriculum Development, Washington, D.C., 1961, 60 p.

Discusses various summer programs. The authors recommend a voluntary tuition-free summer school which is integrated with the regular school year as far as both program and budget are concerned. They also recommend year-round contracts for teachers and discuss the programs in Rochester, Minnesota, and Langhorne, Penn-

sylvania, as examples of successful year-round programs using year-round contracts for teachers and providing strong summer school programs.

Cammarota, Gloria; Stoops, John A.; Johnson, Frank R., "Summer Programs for Students and Teachers", *Education Digest* 27:3, November 1961, p. 26-28.

Reports on the results of a survey of existing summer school programs across the country. The authors give special attention to the strong summer school program in Florida, where, in the summer of 1957, 45% of the state's students attended summer classes.

Cardozier, V. R., "For a 210-Day School Year", *Phi Delta Kappan* 38:6, March 1957, p. 240-242

Proposes a 210-day term in order to provide an enriched program, reduce juvenile delinquency, and provide more local workshops for teachers.

Childress, Jack R. and Philippi, Harlan A., "Administrative Problems Related to the 11 or 12-month School Year", *The High School Journal* 47:6, March 1964, p. 230-237.

Examines measures which must be taken to avoid problems in instituting a year-round school program. The authors discuss at some length the following: (1) acceptance by the professional staff of the concept of the year-round school; (2) acceptance by the community of the financial obligation of a year-round school program; (3) provision of time for inservice education of staff; (4) flexible handling of vacation periods and absences; (5) accommodation of learning facilities; (6) provision of "breaks" for faculty; (7) creative educational programming (including reexamination of the Carnegie unit); (8) coordination among various agencies; (9) reduction of long-term personal contacts; (10) expansion of curriculum and role of school; (11) scheduling of maintenance services and revision of space utilization; (12) coordination of the school program with the shorter work year and work week.

Cincinnati Public Schools: Department of Research, Statistics, and Information, *The Four-Quarter School Year: A Status Report with Pertinent Applications to Cincinnati,* Cincinnati Public Schools, Cincinnati, Ohio, 1958, 76 p.

Examines staggered four-quarter plan, with four quarters of twelve weeks each and the remaining four weeks either as a general vacation in the summer or as one week of non-attendance after each term. The report examines data from schools in which the plan was tried or seriously considered and then lists the general advantages and disadvantages of the plan, projecting specific results for Cincinnati. No recommmendation is made, but the tone of the report is not enthusiastic.

Citizens' Committee of the Sequoia Union High School District, *The Four-Quarter Plan and Other Methods of High School Plant Utilization,* Sequoia Union High School District, Redwood City, California, 1960, 111 p.

Analyzes four plans: the traditional September to June year plus a voluntary eight-week summer session; the staggered four-quarter plan; the traditional September to June year with double sessions; the 215-day school year with double sessions. The committee estimates the costs of various plans and also considers educational and administrative implications, effects on teachers, and the impact on the community. No one plan is recommended; instead, the committee suggests further study and the submission of alternate proposals to the voters.

Cory, Robert T., "Parents Evaluate an Eleven-Month Program", *Education,* November 1966, p. 167-170.

Bibliography

Describes the summer program in Rochester, Minnesota, which offers eleven-month contracts to teachers. Teachers on extended contracts spend the summers in various activities: teaching in summer school, working on curriculum, attending summer school, attending district workshops, or traveling. The voluntary summer school offers four-week enrichment courses and seven-week credit courses. A survey of 360 families in the district revealed that the summer program was regarded very favorably by 90% of those interviewed.

Deacon, J. M., "Year-Round Program", *Bulletin of the National Association of Secondary School Principals* 40:219, April 1956, p. 88-90.

Reviews the year-round program in Lexington, Kentucky. Begun in 1948, the program includes the option of a twelve-month contract for teachers, who work in a five-year cycle - 3/5 of the teachers on extended contracts teach in summer school, 1/5 are enrolled in university courses, and 1/5 are on personal leave. The summer school schedules morning classes only; afternoons are devoted to teacher workshops.

Dickens, Robert L., and Ballantyne, Robert H., "Year-Round Operation", *Educational Record,* Fall 1966, p. 467-473.

Discusses pros and cons of year-round operation for institutions of higher learning.

Easton, Elmer C., *Year-Round Operation of Colleges: Engineering Research Bulletin,* No. 41, Rutgers, The State University, New Brunswick, New Jersey, 1958, 38 p.

Examines factors involved in changing the schedule of a university from the traditional two-semester calendar to a program with instruction throughout the calendar year. The author emphasizes the trimester plan in his study and furnishes much statistical analysis.

Educational Research Service, "Extended-Year Contracts for Teachers", *ERS Reporter,* September 1964, p. 1-7.

Reports on extended-year teacher contracts as a means of improving the professional status of teachers. The programs of five school districts offering extended contracts are examined; they are Glencoe, Illinois; Rochester, Minnesota; Lakewood, Ohio; Milwaukie, Oregon; and Stevenson, Washington.

Educational Research Service, "Summer Enrichment Programs" *ERS Circular,* No. 2, Washington, D.C., 1968. 60 pages.

Describes 81 summer programs designed for enrichment in school districts across the country. The descriptions include such details as grade level, instructional personnel, nature and length of program, financial support, eligible students and costs to students. The programs were chosen on the basis of originality from among 369 programs submitted in response to a survey conducted by ERS among 400 urban, suburban, and rural school districts varying widely in size.

Educational Research Service, "Summer School Programs", *ERS Circular,* No. 4, Washington, D.C., July 1963, 46 p.

Summarizes the results of a survey of summer school programs in 275 school systems with pupil enrollments of 12,000 or more. The report gives details on the length of the summer term, the length of the day, the year the program was established, and the types of courses offered.

Educational Research Service, "Summer School Programs: Teaching Staff, Salaries, and Financing", *ERS Circular,* No. 5, Washington, D.C., October 1963, 46 p.

Continues the report on a survey of summer school programs in 275 school systems with pupil enrollments of 12,000 or more.

Education Summary, "The Extended School Year: What's Being Done", *Education Summary,* July 1, 1968, p. 4-5.
Examines current developments with regard to the extended school year. Special attention is given to the four-quarter plan being initiated in Atlanta, Georgia, and to the five-year study recently completed in New York State.

Education Summary, "The Twelve-Month School: Six Possible Arrangements", *Education Summary,* October 1, 1967.
Furnishes very brief outlines of six extended school year designs: the rotating or consecutive four-quarter plan; the extended summer session; the extended semester system; the continuous school year; the trimester system; the quadrimester system.

Engh, Jeri, "Why Not Year-Round Schools", *Saturday Review,* September 17, 1966, p. 82-84.
Reviews advantages of year-round schools, with emphasis on rotating four-quarter plan. Among the benefits mentioned are the alleviation of overcrowded classrooms and the reduction of construction needs; opportunities for families (and businesses) to schedule vacations at different seasons of the year; increased flexibility, with implications for curriculum and scheduling; professional status and pay for teachers, reduction in the rate of juvenile delinquency.

Faculty of Lincoln-Thorburn Schools, *The All-Year School,* Lincoln-Thorburn Schools, Urbana, Illinois, 1959, 18 p.
Recommends adoption of twelve-month contracts for teachers and a summer program for students that is independent of the regular year program, with a different principal and a variety of experiences for students.

Faunce, Roland C., "Twelve Months of School", *Bulletin of the National Association of Secondary School Principals* 36:183, January 1952, p. 25-29.
Discusses trend toward year-round school, such as that in Glencoe, Illinois. The author reviews the advantages of the year-round school as well as the problems which attend it, and stresses that three principles are basic in the development of a twelve-month school year:
The program must be adapted closely to local needs.
The program must evolve from the planning of all involved, including community.
The chief justification must be better education for children.

Fawcett, Novice G., "A New Challenge to Education", *Theory into Practice* 1:3, June 1962, p. 125-130.
Reviews the advantages of year-round schools, including the elevation of teachers to professional status and a higher level of economic security, the better utilization of school plants, and the balancing of demands on community agencies throughout the year.

Fitzpatrick, Dave, "Why Nova School Switched to Three Seventy-Day Trimesters", *Nation's Schools* 77:4, April 1966, p. 30, 34.
Reviews history of extended year program at Nova High School since 1963. Nova began its program with a 230-day year, changed to 193 days, and then in 1965 adopted a 210-day calendar which is still in use. Details of the school calendar are provided.

Florida Educational Research and Development Council, *Year-Round Schools for Polk County, Florida: A Feasibility*

Bibliography

Study, Florida Educational Research and Development Council, College of Education, University of Florida, Gainesville, Florida, 1966, 71 p.

Examines seven school year plans, including the four-quarter plan, the summer session plan, and the trimester plan. For each plan, there is an examination of administrative feasibility, teacher and pupil personnel problems, curriculum development, and public relations, as well as a detailed cost analysis. The report also furnishes the results of a poll of public reaction to each of the school calendars discussed. A further study of the Multiple Trails Plan developed in New York State is recommended, since the council finds this plan to appear perhaps most promising of all it reviewed.

Fulton County Board of Education, *Materials on Fulton County's Twelve-Month School Plan,* Fulton County Board of Education, Atlanta, Georgia, 1968.

Outlines year-round school plan initiated in Fulton County in fall of 1968. Included in the presentation are the rationale behind the program, its structure in terms of time and in terms of courses, the reorganization of the curriculum into independent quarter courses, attendance requirements, and finance. An outline of course requirements for grades eight to twelve is also provided.

Geisinger, Robert W., *The Extended School Year Concept,* Bureau of Research, Administration and Coordination, Department of Public Instruction, Commonwealth of Pennsylvania, 1968, 30 p.

Surveys literature regarding extended school year and reports on studies conducted by Florida and New York. Several extended school year designs are examined; the bulk of the report emphasizes the continuous progress plan.

Gilchrist, Robert S., and Edmunds, Edwin R., "The Value of an Independent Summer Program", *Theory into Practice* 1 :3, June 1962, p. 162-165.

Argues for an independent summer program rather than an extended school year program. The authors maintain that an extended school year would simply mean more of the same atmosphere and activities, and that children need a variety of experiences, including those outside the traditional classroom structure. The authors propose that a summer program should offer only noncredit courses, thus relieving the pressure for grades or credits. The relaxed atmosphere would permit the teacher to experiment with and evaluate new approaches and would afford the cadet teacher a chance for valuable experience.

Gillin, B., "Twelve-Month Schools Being Studied by Montgomery", *Philadelphia Inquirer,* October 20, 1968.

Reports study underway in Montgomery County, Pennsylvania, on possibility of twelve-month school program to relieve problems created by mushrooming enrollment. Dr. Allen C. Harman, county superintendent, reports that a trimester program will receive serious consideration in the study, which will involve several years.

Gillis, Reid, "The Twelve-Month School Year: Plans and Strategy", *Education Summary,* September 1, 1968, p. 5-6.

Outlines basic features of a four-quarter system being initiated in Metropolitan Atlanta in fall of 1968. The author reports that students must attend three quarters but may attend all four. Subject areas have been reorganized into quarter courses and the Carnegie unit has been abandoned in favor of a more flexible credit hour system. The author emphasizes that the chief objective of the program is not economy, but improvement of educational opportunity.

Glass, Robert E., "Calendar Possibilities for Year-Round Schools", *Theory into Practice* 1:3, June 1962, p. 136-140.

Examines four extended-year school calendars, listing the advantages and disadvantages of each: a voluntary summer program, double sessions with a summer enrichment program, a continuous school year, a staggered four-quarter system. The author appears to favor the first plan.

Governor's Study Commission on the Public School System of North Carolina, "The Extended School Year": Chapter 12 of *The Report of the Governor's Study Commission on the Public School System of North Carolina,* Raleigh, North Carolina, 1968, 10 p.

Reports on a study of the extended school year by a Governor's Commission. Arguments for extending the school year and current trends in this area are examined and special attention is given to reviewing the quarter system, the extended summer session system, and the extended semester system. The Commission's Advisory Committee made three recommendations: the continuation of the nine-month school term with extended employment of the teachers; the establishment of experimental twelve-month school plans; and an expanded summer program for all children and youth of school age.

Guba, Egon G., Editor, "The Year-Round School", *Theory into Practice* 1:3, June 1962, p. 121-175.

Devotes entire issue to examination of the year-round school.

Hartsell, Horace C., "The Twelve-Month School", *Bulletin of the National Association of Secondary School Principals* 37:198, December 1953, p. 18-33.

Stresses need for year-round schools and reviews history of all-year school experimentation. The author analyzes the problem encountered in such programs as the four-quarter plans of Aliquippa and Ambridge, Pennsylvania, and recommends a program such as those in South Park Schools, Beaumont, Texas; Glencoe, Illinois; Decatur, Illinois; and Rochester, Minnesota. These plans involve a voluntary summer school used for enrichment and experimentation and extended-year contracts for teachers.

Hicks, Maynard, "The Stevenson Story", *The American School Board Journal* 149:2, August 1964, p. 57-58.

Reviews the eleven-month program being begun in Stevenson, Washington. Teachers are offered the option of an eleven-month contract, and voluntary summer classes are held for students in June and July.

Holmes, George W., III and Seawell, William H., "The Extended School Year: Is It Administratively Feasible?", *The High School Journal* 47:6, March 1964, p. 224-229.

Examines the history of efforts to extend the school year. The authors maintain that the extended school year is "entirely feasible from an administrative frame of reference". They stress, however, that the following areas are critical if an extended school year program is to be successful: (1) clarification of the legal status of extended terms; (2) state financial support for extended terms; (3) education of the public to the need for allocating a greater proportion of public funds for education; (4) attention to broadening the educational program rather than accelerating students; (5) education of laymen and educators to question traditional concepts of the school year.

Holmes, George, and Seawell, William, *Summer School Programs in Virginia,* Virginia State Department of Education,

Bibliography

Division of Educational Research, Richmond, Virginia, December 1965, 27 p.

Traces the history of summer school programs in Virginia and examines current trends. The authors advocate the institution of tuition-free summer programs, pointing out that the students most in need of summer programs are least able to afford the tuition.

Houston Independent School District, *Trimester,* Houston, Texas, 1968, 10 p.

Outlines the trimester plan initiated in September 1968 in the San Jacinto High School on a pilot school basis. The year will consist of two eighteen-week terms plus a twelve-week summer term during which a student can earn 2½ credits. Students attend any two trimesters and may attend all three, though tuition must be paid for days of schooling exceeding 175.

Irons, H.S., "Utilizing Buildings and Instructional Materials Twelve Months Annually", *The American School Board Journal* 88:3, March 1934, p. 17-19.

Reports on the first two years of twelve-month operation at Ambridge, Pennsylvania. The author, then superintendent of Ambridge schools, reports that results have been satisfactory and that the primary objective -- to relieve overcrowding -- was achieved at once with the adoption of a staggered four-quarter system. The chief objection to the plan has been the arbitrary assignment of pupils to particular vacation quarters.

James, H. Thomas, "Is Year-Round School Operation Economical?", *Theory into Practice* 1:3, June 1962, p. 141-147.

Discusses the four-quarter plan as an economy measure. The author concludes that the staggered four-quarter plan is more expensive because of increased salaries, higher maintenance costs, etc. The saving in capital outlay which is realized is only a relatively small portion of the total educational cost, the author points out.

Jensen, George M., "Let's Try Year-Round Schools", *Parents' Magazine,* September 1967.

Advocates adoption of rotating four-quarter plan. The author cites a number of advantages, including admittance four times a year; vacation jobs for more students; reductions in the dropout and juvenile delinquency rates; improved status and pay for teachers; more efficient utilization of buildings; and relief for overcrowding and teacher shortages.

Jensen, George M., *Let's Update Our School Calendar,* Twin City Federal Savings and Loan, Minneapolis, Minnesota, 1962, 12 p.

Argues for adoption of rotating four-quarter plan on grounds that it would be both economical and educationally beneficial. The author announces the founding of the National School Calendar Study Committee to study year-round schools further and work toward their implementation.

Lombardi, John, "The Los Angeles Study of Year-Round Operation", *Theory into Practice* 1:3, June 1962, p. 131-135.

Reports on the 1954 Los Angeles study of the year-round school. The plan considered most feasible was the staggered four-quarter plan, which, under ideal conditions, could save as much as 25% in operating expenses. The plan was not adopted, however, because it was felt that its disadvantages - particularly the opposition of parents to staggered vacations - outweighed its advantages.

Long Beach Public Schools, *Summary of Replies to "Inquiry Concerning the All-Year School",* Long Beach Public Schools,

Long Beach, California, 1952, 5 p.

Reports on the results of a questionnaire sent to 107 superintendents in cities with a population of 100,000 or more to determine how many schools were using or considering a four-quarter plan. The returns showed that no schools were using the plan and that there was little interest in such a plan.

MacPherson, Vernon D., "Keeping Schools Open All Year", *Nation's Schools* 56 :3, September 1955, p. 51-54.

Provides a brief history of the all-year school from 1900 to 1954 and reviews the Los Angeles study of the all-year school. The author examines the problems which arise with the transition to an all-year school program such as the four-quarter plan and concludes that the trend is away from an all-year school and toward a somewhat longer school year with extensive summer programs.

May, Frank B., "Year-Round School: A Proposal", *Elementary School Journal* 61:7, April 1961, p. 388-393.

Proposes a four-quarter plan in which all children will be required to attend four quarters a year. Each quarter will last eleven weeks, with a two-week vacation after each period. Teachers who serve in the system for four years will be given a year's leave of absence with full pay for study or travel, with the option of waiving this leave and doubling their income this year. The author plans a typical calendar under this system and lists many advantages to be derived from it.

Merwin, Willard V., "A Trimester Plan", *The American School Board Journal* 146:4, April 1963, p. 15.

Discusses the trimester plan being initiated in Florida State University's laboratory school in Tallahassee, Florida. The plan calls for a 225-day year with a slightly longer school day, some night classes, and physical education on Saturdays. For the first two years of the program, all students must attend 2½ trimesters per year, with the last ½ trimester optional. In the third year, students must attend any two of the three trimesters.

Miles, Dorothy, "Lexington's Year-Round School", *The American School Board Journal* 124:3, March 1952, p. 27-28.

Discusses Lexington's summer program, begun in 1948. Teachers are on a twelve-month contract, with a five-year cycle in which they teach in summer school, take university courses, and have one year's personal leave. The summer school classes are based on voluntary attendance and last eight weeks for secondary students and six weeks for elementary students.

Montgomery County Public Schools, *The Twelve-Four Plan*, Montgomery County Public Schools, Montgomery County, Maryland, 1960, 3 p.

Proposes the "twelve-four" plan, a staggered enrollment plan in which a new group of students begins every four weeks. Students have twelve weeks of school and then four weeks of vacation year-round. Advantages of the plan for students, teachers, and citizens are given. The plan is promoted primarily as an alternative to a building program.

Moon, James V., "The Extended School Year", *Education* 84:9, May 1964, p. 557-564.

Examines four extended school year plans, listing advantages and disadvantages of each: the staggered four-quarter plan, the 48-week school year for all, the voluntary summer program, the summer program for staff members. The author gives special attention to the

Bibliography

program in Rochester, Minnesota, which combines the third and fourth plans.

National Education Association Research Division, "The All-Year School", *NEA Research Memo* 1964-19, July 1964, p. 1-9.

Reviews the history of the all-year school, examines arguments for an extended school year, compares various all-year school plans. Special attention is given to the extended summer school program as the most practical and advantageous plan.

National Education Association Research Division, *The Rescheduled School Year,* Research Summary 1968-S2, National Education Association Research Division, Washington, D.C., 1968, 39 p.

Provides overview of recent activity in the area of the extended school year. Various types of extended school year plans are examined, and experimentation with these plans is reported. The comprehensive report stresses the need for further experimentation before conclusions about the merits of various plans can be drawn.

Nation's Schools, "All-Year School Can Wait, Two of Three Schoolmen Assert", *Nation's Schools* 73:3, March 1964, p. 84.

Reports on a survey conducted among administrators in fifty states to determine whether they favored a staggered four-quarter school plan. Of the approximately 400 replies, 67% were unfavorable. The biggest objection recorded was the teacher's need for a "breather".

Nation's Schools, "Lengthening the School Year", *Nation's Schools* 62:6, December 1958, p. 6.

Reports on the results of a survey of superintendents throughout the nation to determine their attitudes toward various proposals for extending the school year. While 65% of the respondents favored some extension of the school year, there was little agreement on how this should be accomplished. Two specific proposals - for two semesters of 100 days each and for four terms of 50 days each -- met with overwhelming disapproval.

Nation's Schools, "Los Angeles Rejects Plan for Keeping Schools Open Year Round; Calls It Costly, Inconvenient", *Nation's Schools* 55:2, February 1955, p. 120, 122.

Reports on Los Angeles' study of the four-quarter plan and lists the disadvantages that led the school board to reject the plan. The most serious obstacle was reported to be community inertia.

Nation's Schools, "Trimester Plan Makes Nova Novel", *Nation's Schools* 73 :4, April 1964, p. 84-87.

Features Nova High School in its first year of operation in a "School-of-the-Month" article. Examines such features of the Nova program as its 220-day trimester plan, its ungraded program, its lack of a traditional cafeteria, and others.

Ogden, Clyde L., "The Four-Quarter Plan" How Practical an Idea?", *The American School Board Journal,* July and August, 1965, p. 19-21.

Reviews the four-quarter plan and the history of experimentation with it. The author notes that the experiences of schools that have tried the plan seem to indicate that its disadvantages outweigh its advantages. He notes further that cities that have studied the plan have generally not adopted it.

Oldham, Francis H., "Length of the School Day and the School Year", *Bulletin of the National Association of Secondary School Principals* 46:275, September 1962, p. 194-198.
Discusses the need for more instructional time and mentions various extended school year plans. The author appears generally unenthusiastic about them.

O'Rourke, Joseph, "The Extended School Year: A Teacher's View", *Theory into Practice* 1:3, June 1962, p. 166-169.
Argues for an eleven-month school year not for economy but for quality education. The author emphasizes that an extended school year would provide the teacher with more time for individualized instruction, experimentation, teaching in depth, teacher-pupil interaction, and self-improvement.

PACE Review, "Four-Quarter Plan in Operation: Year-Round School for Park's Pupils", PACE Review 3:1, Dec. 1968, p. 1.
Reports the adoption of an extended school year plan at Park Elementary School in Hayward, California. The pilot program funded under ESEA, Title III, for a two-year period, replaces the traditional school year with a 220-day continuous four-quarter plan. All children will attend school for all four quarters, with a three-week vacation period between quarters. The school staff has given considerable attention to reworking the curriculum, emphasizing individualized learning.

Petersen, Robert G., "The Twelve-Months School", *The American School Board Journal* 110:5, May 1945, p. 38-40.
Argues for year-round elementary school to prevent summer forgetting, combat summer behavior problems arising from idleness, teach subjects natural for summer (nature study, etc.), use the school plant more efficiently, and make teachers an integral part of the community. The author proposes that the school year be divided into four quarters of sixty days each, with one week's vacation between quarters.

Quick, Gordon Lewis, *The Advantages of Extending the School Year,* An Unpublished Doctoral Dissertation, University of Nebraska, Lincoln, Nebraska, 1966.
Reports the results of a survey of 200 superintendents, 200 school board presidents, 100 teachers, and 44 college professors to determine their opinions about extending the school year. Respondents rated various benefits to students and teachers provided by an extended school year and also rated various extended school year plans. The favored extended school year designs were summer sessions for students and professional personnel, and the present two-semester calendar with additional days added to each semester. Except for the teachers, the majority of the respondents favored extending the school year in some fashion.

Roe, Warren, A., "All-Year School Organization", *Educational Method* 10:2, November 1930, p. 66-69.
Supports the all-year plan as a way to offer continuous educational opportunity at economical cost. The author discusses the then-existing all-year (four-quarter) school plans in Aliquippa, Pennsylvania; Newark, New Jersey; Nashville, Tennessee, and others.

Schoenfeld, Clarence A. and Schmitz, Neil, *Year-Round Education: Its Problems and Prospects from Kindergarten to College,* Dembar Educational Research Services, Madison, Wisconsin, 1964, 111 p.
Examines the all-year school concept at all levels. At the elementary and secondary levels, three major patterns

Bibliography

are discussed: the four-quarter system, the extended semester, and the extended summer session. Special attention is given to the experiments in Newark, New Jersey and Nashville, Tennessee. The authors also provide an overview of the extended school year in colleges today, emphasizing experiments with the trimester.

School Management, "All-Year High School - Experiment Ends in Failure", *School Management,* November 1966, p. 73.

Reports that the all-year high school to have been begun at Del Campo High School in San Juan, California, was abandoned by the school board. The principal reasons for its abandonment were insufficient funds, lack of student interest, and poor parent support.

School Management, "The All-Year School: Time for a New Look?", *School Management,* February 1966, p. 86-92, 146-151, 154, 156.

Records an interview with Dr. James E. Allen, Jr., Commissioner of Education for New York State. Dr. Allen discusses the five plans developed by his state for extending the school year by 25 to 40 days. He also compares the all-year school with the extended school year, pointing out that the emphasis in extended school year plans is on quality, not just economy. Other advantages he lists for the New York plans include their providing summer vacations for all and their avoidance of staggered attendance.

School Management, "Are Year-Round Schools the Answer to Overcrowding?", *School Management,* November 1960, p. 25, 28.

Discusses the staggered four-quarter plan and the 48-week school year, listing pros and cons of each. The article recommends voluntary summer schools and/or twelve-month contracts for teachers.

Sessions, E. B., "Maintenance and Operational Costs Involved in a Year-Round Program", *Theory into Practice* 1:3, June 1962, p. 148-153.

Discusses all-year school from viewpoint of school business managers, twenty of whom were interviewed on this subject. Most agreed the year-round school was feasible but would be expensive, largely because of extra costs in maintenance and operations. They estimated that these costs would increase about 25%, plus extra costs in administration, transportation, twelve-month salaries for nonteaching employees, and - probably - air-conditioning. They pointed out that while a four-quarter plan would effect a savings in capital outlay, only about 10% of the total educational cost goes for capital outlay. They concluded that the public must be sold not on savings via the all-year school but on educational advantages.

Steinhilber, August W. and Sokolowski, Carl J., *State Law on Compulsory Attendance,* United States Government Printing Office, Washington, D.C., 1966, 103 p.

Provides information about the compulsory attendance laws of all of the states.

Thomas, George I., *Economy and Increased Educational Opportunity Through Extended School Year Programs,* New York State Education Department, Albany, N.Y., 1956, 18 p.

Discusses the benefits of an extended school year of from 204 to 216 days: special aid to the culturally disadvantaged, reduction in forgetting, fewer dropouts, reduction in juvenile delinquency, improvement in teaching staffs, savings through reduction in the total enrollment. Dr. Thomas describes several extended school year plans

developed by New York State; none of them relies on staggered attendance, which he does not recommend.

Thomas, George I., *Extended School Year Designs,* New York State Education Department, Albany, N.Y., 1966, 126 p.

Analyzes a number of extended school year plans in great detail, supplying sample schedules, cost analyses, adjustment plans, and estimates of the impact on the state. The following plans are examined: the continuous progress plan, in which seven levels could be covered in six years by the use of a 210-day school year; the trimester plan, in which three seventy-day trimesters offer opportunity for acceleration and enrichment; the quadrimester plan, with a 204 to 220-day term of four quadrimesters; the modified summer plan, which emphasizes acceleration via seven or eight-week summer sessions; the extended K-12 plan, featuring a continuous school year of 204 to 212 days and a saving of one year out of thirteen for able students; the split trimester plan, with 2½ trimesters compulsory and the remaining half trimester optional.

Thomas, George I., *Introducing the Multiple Trails Extended School Year Plan,* New York State Education Department, Albany, New York, 1968.

Outlines the basic features of the Multiple Trails Plan, which employs an eleven-month school year and a multiple modular approach to scheduling. The ultimate goal of the plan is a continuous progress school; this stage could theoretically be reached within several years after the Multiple Trails Plan is initiated.

Thomas, George I., *Setting the Stage for Lengthened School Year Programs,* New York State Education Department, Albany, New York, 1968, 113 p.

Reports on experimentation with various extended school year plans developed by New York State. Between 1964 and 1967 pilot projects were instituted in several school districts to test the feasibility of various features of these plans. This report summarizes the results of this testing and recommends legislation and areas for state leadership in the program to extend the school year.

Thomas, Maurice J., "Returns on a Year-Round Investment", *Educational Leadership* 5:7, April 1948, p. 459-464.

Describes the twelve-month program in Rochester, Minnesota, where teachers are given the option of receiving a twelve-month contract. These "career teachers" spend their summers working in the summer recreation program, teaching special summer classes, participating in local workshops, traveling, or attending university courses.

Tucson Citizens' Committee, *Tucson Citizens' Committee Report on the Year Round School,* Tucson, Arizona, 1960, 50 p.

Proposes the five-term plan to end double sessions and delay the construction of additional buildings. The five-term plan is a staggered attendance plan similar to the four-quarter plan but involving five groups of students and five attendance periods rather than four. The report includes a study on year-round school and building costs done by the Bureau of Educational Research at the University of Oregon. This study found that the five-term plan would save the school district a small amount on building costs but would increase slightly the per-pupil expense for operational costs.

United States Office of Education, *TOPS: Teen-age Opportunity Programs in Summer,* United States Office of Education; Lansing, Michigan, 1967, 24 p.

Outlines federally-funded summer programs in six states. The programs discussed are generally nonacademic.

Bibliography

Vanderslice, H. R., "The All-Year School in Aliquippa, Pennsylvania", *Elementary School Journal* 30:8, April 1930, p. 576-585.

Reports on staggered four-quarter plan initiated in Aliquippa in 1928 to eliminate double sessions and avoid building program. The author, then superintendent of the Aliquippa schools, reports that the plan works satisfactorily, with attendance good in all four quarters. Under the Aliquippa plan, each quarter begins and ends in the middle of a season, so that each student will have a vacation period that includes two seasons of the year.

Vanderslice, H. R., "Five Years' Experience with the All-Year School", *Elementary School Journal* 34:4, December 1933, p. 256-268.

Reports that the four-quarter plan has worked well in Aliquippa for five years, effecting savings by means of reduction in the cost of debt service, construction, maintenance, and insurance; in reteaching repeating students; in teacher salaries.

Virginia State Department of Education, *The Extended School Year: Literature Review,* Virginia State Department of Education, Richmond, Virginia, 1968, 22 p.

Provides annotated review of literature on the extended school year. Four extended school year designs are also discussed briefly and a bibliography provided for each: summer sessions, the staggered four-quarter system, the trimester plan, and the continuous school year.

Wagner, Paul B., "Twelve-Month School", *Bulletin of the National Association of Secondary School Principals* 40: 219, April 1956, p. 218-220.

Reviews the four-quarter plan and its history.

Wehmhoefer, Roy A., *The Twelve-Month School Year: A Study of the Advantages and Disadvantages,* Cook County School District, Chicago, Illinois, 1968, 10 p.

Itemizes the pros and cons of the four-quarter system. A major advantage examined in the report is the fact that the number of teachers needed would drop by one-fourth. The entire staff could be retained, however, teaching loads could be reduced, and time could be given to workshops, research, etc. A major disadvantage seen is the added cost of such a program.

Wenger, Marjorie A.,"Glencoe's Summer Program Has Two Aims: Competence and Enrichment", *Nation's Schools* 64 :4, October 1959, p. 58-63.

Reviews the career teacher plan of Glencoe, Illinois, where teachers are on twelve-month contracts and spend their summers in a variety of activities: teaching in summer school, doing advanced study, traveling, participating in district workshops. The summer program for the children aims at enrichment, not acceleration.

White, Richard E., "A Board Member Looks at the Extended School Year", *Education,* March 1968, p. 245-248.

Outlines several extended school year plans, examines reasons that prompt such plans, and stresses the need to examine specific factors before adopting an extended school year plan. The article gives special attention to details of the summer program at Rochester, Minnesota.

Wilson, Lytle M., *The All-Year School in Aliquippa,* Aliquippa Public Schools, Aliquippa, Pennsylvania, 1958.

Supplies a history of Aliquippa's all year school, which was adopted for reasons of economy. The author itemizes savings of $282,000 over seven years under the four-

quarter plan and reports that there were no visible effects on attendance, health, or achievement.

Witherspoon, Ralph L., The Florida State University, Tallahassee, Florida, *Effect of Trimester School Operation on the Achievement and Adjustment of Kindergarten and First through Third Grade Children,* U.S. Department of Health, Education, and Welfare, Office of Education, Bureau of Research, 1968. 29 p.

Examines the effect of extended school attendance (225 days a year) on young children. After a three-year study of children in grades K-3 at the Florida State University Laboratory School, which operated on a trimester basis the author concluded that children who attended school during the summer tended to have more behavioral problems and lower achievement than children who did not attend summer sessions. He suggested further that "there may be an optimum time period of instruction beyond which undesirable effects result".

Wright, Grace S., *The All-Year School,* Circular Number 470, United States Department of Health, Education and Welfare, Washington, D.C., 1958. 14 p.

Examines various extended school year plans, citing the advantages and disadvantages of each plan. An annotated bibliography is included in the circular.

Wyman, Raymond, "Full Employment of Teachers and Schools", *American School Board Journal* 135:1, July 1957, p. 25-26, 67.

Proposes combining features of the year-round school and the double-session day. The author outlines an eleven-month school year, with a four-hour day for two sets of students. Teachers would have an eight-hour day, with four hours of teaching and four hours for preparation, paper work, conferences, etc.

Yeomans, Edward, *And Gladly Learn: Summer Enrichment Programs for Urban Children,* National Association of Independent Schools, Boston, Massachusetts, 1965, 50 p.

Describes summer enrichment programs conducted at private schools for children from the inner city.

Appendix A

A Case Study To Show Projected Costs To A Representative Delaware School System With The Adoption Of An Extended School Year And A Voluntary Summer Program

Introduction

N-4 is a school district in Delaware. It was chosen quite arbitrarily to illustrate the effects that an extended school year might have on an actual school district. All data used in calculations and predictions were taken from reports submitted to the Department of Public Instruction by the N-4 District. A more refined set of calculations could be possible if actual records of the district were used. This was not done because this initial report is concerned primarily with trends.

An Extended Year For The Elementary School

Objective

Determine the additional cost for salaries, operating expenses, and transportation.

Assumptions

1) The school year will be expanded from 180 days to 200 days of instruction.
2) Teachers will be paid for 210 days, or 13½% more than for 185 days.
3) Division II cost will be computed at 11% for 20 additional days.
4) Acceleration will not be considered as a factor in computing cost.

FIGURE 6

PROJECTED ENROLLMENTS FOR GRADES 1-12 BASED ON ADJUSTMENTS DUE TO PAST ATTRITION PATTERNS TRADITIONAL ORGANIZATION DISTRICT N-4

Grade	*1969*	*1970*	*1971*	*1972*	*1973*	*1974*
1	738	775	814	855	898	943
2	626	657	690	724	761	800
3	593	613	644	676	710	746
4	542	593	613	644	676	710
5	552	553	605	625	657	690
6	549	530	531	581	600	631
7	624	582	562	563	616	636
8	553	624	582	562	563	616
9	585	625	705	657	635	636
10	491	538	575	647	604	584
11	463	437	479	512	576	534
12	421	426	402	441	471	524
Total	6,737	6,953	7,202	7,487	7,767	8,050

FIGURE 7

PROJECTED EXPENDITURES THAT COULD BE EXPECTED WITH THE ADOPTION OF A 200 DAY EXTENDED SCHOOL YEAR IN GRADES 1-6 FOR 1970-1971 DISTRICT N-4

A. ESTIMATED ALLOWANCE FOR TEACHER SALARIES	
1) Assumptions:	
a. Ratio of classroom teachers to pupils	1:25
b. Average salary for 185 days	$ 8,700.00
c. Number of additional days for teachers	25
d. Average salary based on additional 25 days	$ 9,875.00
e. Number of students enrolled	3,721
f. Number of teachers needed	149
2) Allowances	
a. Allocations for salaries	$1,471,375.00
b. Allocations for social security . . .	55,785.60
c. Total for salaries	$1,527,160.60
3) Comparative Cost	
a. Cost for 185-day teacher contract .	$1,352,085.60
b. Cost for 210-day teacher contract	$1,527,160.60
c. Difference.	$ 175,075.00
B. ESTIMATED DIVISION II COST*	
1) Assumptions	
a. Allocations for 180 days of instruction per unit of 25 students**	$ 1,050.00
b. Allocation for 200 days of instruction per unit of 25 students . .	$ 1,165.00
2) Allowances	
a. Number of units.	149
b. Total allowance for Division II . .	$ 173,585.00
3) Comparative Cost	
a. Cost for 180 days	$ 156,450.00
b. Cost for 200 days	$ 173,585.00
c. Difference	$ 17,135.00
C. ESTIMATED TRANSPORTATION COST	
1) Assumptions	
a. Number of students transported . .	2,121
b. Cost per pupil per day	$ .16
2) Allowances	
a. Total allowance for transportation.	$ 67,872.00
3) Comparative Cost	
a. Cost for 180 days.	$ 61,084.00
b. Cost for 200 days.	$ 67,872.00
c. Difference.	$ 6,788.00
TOTAL PROJECTED EXPENDITURES (A, B, C).	$ 198,998.00
TOTAL PROJECTED EXPENDITURES EXPRESSED AS:	
Average Cost per pupil	$ 53.48
Average cost per pupil per day	$ 2.67

* Includes certain items of current expense but not transportation costs.

** State formula for allocation of operating money to districts.

Summer Program District N-4

Objectives

1) Determine the cost of teacher salaries for a summer session.

Appendix A

2) Determine the cost of operating expenses for a summer session.

Assumptions

1) The summer school will operate for 30 days.
2) Teachers will be paid at the same rate as for the regular school year.
3) State appropriation for operation will be computed at the same rate as for the regular school year.
4) Thirty days represents 16% of 180 days; therefore, teachers' salaries and state appropriation will be based on 16% additional time.
5) Fifty percent of all students will attend on a voluntary basis.
6) Acceleration to reduce enrollment will not be considered.
7) Fifty percent of students will require transportation.
8) The cost of transportation is 16 cents per day per student. This rate is the same as the regular school year rate.

FIGURE 8

PROJECTED SUMMER ENROLLMENTS

Grade	*1970*	*1971*	*1972*	*Grade*	*1970*	*1971*	*1972*
1	368	388	407	7	312	291	231
2	313	329	345	8	277	312	291
3	297	307	322	9	293	313	356
4	271	297	307	10	246	269	288
5	276	277	303	11	232	219	240
6	275	265	266				
Total	1,800	1,863	1,950	Total	1,360	1,404	1,406

FIGURE 9

PROJECTED EXPENDITURES
FOR A SUMMER SESSION IN 1970
DISTRICT N-4

A. TEACHER SALARIES	
1) Assumptions:	
a. Ratio of classroom teachers to pupils elementary	1:25
b. Ratio of classroom teachers to pupils secondary	1:20
c. Anticipated enrollment elementary	1,800
d. Anticipated enrollment secondary	1,360
e. Average teacher salary for regular year	$ 8,500
f. Average teacher salary for summer	$ 1,350
2) Allowance for classroom teachers' salaries:	
a. Number of elementary teachers needed	72
b. Number of secondary teachers needed	68
c. Allocation for teachers' salaries for 30 days	$ 190,400
B. OPERATING EXPENSES	
1) Number of elementary units	72
2) Number of secondary units	68
3) Total units	140
4) State allocation @ $175/unit	$ 24,500
C. TRANSPORTATION	
1) Students transported	1,580
2) State allocation	$ 7,584
TOTAL PROJECTED EXPENDITURES (A, B, C)	$ 222,484

TOTAL PROJECTED EXPENDITURES	
EXPRESSED AS:	
Average cost per pupil	$ 70.41
Average cost per pupil per day	$ 2.35

FIGURE 10

PROJECTED EXPENDITURES FOR A
SUMMER SESSION IN 1971
DISTRICT N-4

A. TEACHER SALARIES	
1) Assumptions:	
a. Ratio of classroom teachers to pupils elementary	1:25
b. Ratio of classroom teachers to pupils secondary	1:20
c. Anticipated enrollment elementary.	1,863
d. Anticipated enrollment secondary .	1,404
e. Average teacher salary for regular year	$ 8,700
f. Average teacher salary for summer	$ 1,392
2) Allowance for classroom teachers' salaries:	
a. Number of elementary teachers needed	75
b. Number of secondary teachers needed	70
c. Allocation for teachers' salaries for 30 days.	$201,840
B. OPERATING EXPENSES	
1) Number of elementary units	75
2) Number of secondary units.	70
3) Total units.	145
4) State allocation @ $175/unit	$ 25,375
C. TRANSPORTATION	
1) Students transported.	1,633
2) State allocation	$ 7,840
TOTAL PROJECTED EXPENDITURES (A, B, C).	$235,055
TOTAL PROJECTED EXPENDITURES EXPRESSED AS:	
Average cost per pupil	$ 71.95
Average cost per pupil per day	$ 2.40

Appendix B

A Record of Experimentation With Rescheduling The School Year

1904 -- The history of experimentation with the school calendar began in 1904 when Bluffton, Indiana, put a rotating four-quarter plan into operation. This experiment was discontinued in 1915.

1912 -- Newark, New Jersey, initiated a continuous four-quarter plan which can be seen as a forerunner of the quadrimester plan. The school year was divided into four terms, which covered a full calendar year. All pupils were required to attend school during the first three quarters, while attendance during the fourth, or summer, quarter was voluntary. The plan was designed especially to serve the population of Newark, which had a high percentage of poor foreign-born families. Children from these families could get extra schooling during the summer quarter to help them meet with a greater degree of success during the regular year. Summer attendance was as high as 75 percent, and students who attended school year-round showed no damaging physical effects. The Newark experiment was considered a success but was abandoned at the beginning of the Depression because of the costs involved in the program.

1922 -- A continuous four-quarter plan similar to that used in Newark was adopted in Nashville, Tennessee. Summer enrollment in Nashville fluctuated at about 50 percent, with higher attendance in Negro schools than in white schools.[25] The Nashville experiment, considered only partially successful, was discontinued in 1932.

1925 -- This year saw a high-water mark in the experimentation with the rotating four-quarter plan, with thirteen cities reportedly using the system. The following cities have all been mentioned as having adopted -- and subsequently abandoned -- the system: Bluffton and Gary, Indiana; Mason City, Iowa; Eveleth, Minnesota; Omaha, Nebraska; Albuquerque, New Mexico; Ardmore and Tulsa, Oklahoma; Ambridge and Aliquippa, Pennsylvania; Amarillo and El Paso, Texas; Bayonne, New Jersey; Minot, North Dakota; and Chattanooga, Tennessee. By 1956, the plan was not known to be in use in any city.[26]

1928 -- One of the most publicized experiments was that in Aliquippa, Pennsylvania, where a rotating four-quarter plan was adopted in 1928 to eliminate double sessions and postpone a building program. Students were assigned to attendance quarters, which overlapped seasons of the year. Some students were permitted to attend all four quarters, but acceleration was limited to one year.[27] The experiment achieved its immediate objective of easing overcrowding, and, according to reports, resulted in savings of $282,000 over a seven-year period. No detrimental effects on student attendance

25. NEA Research Division, *op. cit.*, p. 15.
26. *Ibid*, p. 11.
27. Vanderslice, H. R., "The All-Year School in Aliquippa, Pennsylvania", *Elementary School Journal* 30:8, April 1930, p. 576 ff.

achievement, or health were noted.[28] The experiment was discontinued in 1938, when Aliquippa returned to the traditional nine-month school year and embarked on a school building program. This decision was probably based on the consensus that the disadvantages of the four-quarter plan outweighed the economic advantages. Horace C. Hartsell noted the following problems: building maintenance and repair became inconvenient and costly; parents objected to nonsummer vacations; teachers and classrooms changed constantly because teachers were permitted to choose their vacation quarters; there was some evidence of a slackening on the part of both students and teachers during the summer quarter.[29]

1946 -- Plans involving extended contracts for teachers were initiated in Rochester, Minnesota, and Glencoe, Illinois. The Rochester plan offers teachers eleven-month contracts. Teachers spend their summers teaching in summer school; working in the community recreation program; participating in workshops, curriculum studies, or seminars; working on local studies and research projects or on individual projects; or engaging in travel of professional significance.[30] Under the Glencoe plan, teachers are offered twelve month contracts. Summer activities are similar to those in Rochester, and every fourth summer a teacher may take leave with full pay, with no scheduled assignments.[31] Both plans are still in existence; other communities reported to have similar plans are Decatur, Illinois; Lexington, Kentucky (since discontinued); Forest Hills, Michigan; Lakewood, Ohio; Milwaukie, Oregon; Langhorne and Oil City, Pennsylvania; Beaumont, Texas; and Stevenson, Washington.

1963 -- Nova High School, in Fort Lauderdale, Florida, has operated on a trimester schedule since its opening in 1963. The school has experimented with the length of the school year, moving from a 220-day year to a 193-day year and finally (in 1966) to the 210-day year which is presently employed. In addition to the regular 210-day year, Nova has a special "July Program" for students, and a two-week orientation program for new teachers in early August; thus, school facilities are used year-round.[32]

1964 -- Between 1964 and 1967 the Florida State University laboratory school used a 225-day trimester schedule on an experimental basis. Following the completion of the three-year study, the trimester plan was discontinued. An interesting footnote to this experiment may be found in a report by Ralph L. Witherspoon of Florida State University on the effects of trimester operation on children in kindergarten through third grade. After commenting on the fact that children in the extended school year program seemed to have slightly lower achievement and a greater number of behavior problems than children who attended school only during the traditional time, Mr. Witherspoon wrote:

> "The evidence of this research tends to bear out the opinions expressed in the literature

28. Wilson, Lytle M., *The All-Year School in Aliquippa* (Aliquippa, Pennsylvania: Aliquippa Public Schools, 1958), p. 3, 5.
29. Hartsell, Horace C., "The Twelve-Month School", *Bulletin of the National Association of Secondary School Principals* 37:198, December 1953, p. 18ff.
30. Educational Research Service, "Extended-Year Contracts for Teachers" *ERS Reporter,* September 1964, p. 3.
31. *Ibid,* p. 2.
32. NEA Research Division, *op. cit.,* p. 27.

> that, at least for young children, the extended school year does not produce adequate improvement in achievement and adjustment status to justify the added expenditure and effort. In fact, many negative effects were found indicating that there may be an optimum time period of instruction beyond which undesirable effects result."[33]

1964 -- In 1964 a continuous progress extended school year was initiated in the Grace L. Hubbs Elementary School in Commack, New York. More than 200 pupils in grades one through four attended school for 210 days each year, beginning school in August and ending in July. After three years of the experiment, it was concluded that "students can learn proportionately more in a lengthened school year than comparable students who have not been in such a program".[34] Comparison of scores on standardized tests achieved by the extended year students with scores achieved by comparable students who attended only the traditional school year showed that the extended year group attained higher achievement levels than the other group on all tests. Student attendance was slightly higher during the summer period than during the regular school year, and parental reaction to the program was good. (In response to a questionnaire, 88 percent of the parents indicated they would re-enroll their children in a similar program.)

1964 -- Between 1964 and 1967 a modification of the quadrimester plan designed by the New York State Education Department was piloted in the elementary section of the Cato-Meridian Central School. A lengthened school year (200 days) was combined with a longer school day to provide the equivalent of a 220-day year. The school day was increased by anywhere from ten to seventy minutes at the various grade levels; the average increase of forty-nine minutes, combined with the fifteen-day extension of the school year, was designed to permit pupils to finish a year's work in three quadrimesters. The fourth quadrimester could then be spent on work from the next level, and -- in theory -- students would be enabled to save one year's schooling over a seven-year period. Results of the experiment are somewhat inconclusive. The report on the experiment noted that there was resistance to the plan on the part of parents, teachers and students alike. This may have been due at least partly to the fact that the elementary grades at Cato-Meridian are housed in the same building as the upper grades. The lack of a common school calendar and shared vacations led to confusion and conflicts. The following observations were also made in the report:

> "Academic gains are not large enough to support the thesis that the lengthening of an elementary school day improves student achievement. There was no evidence that extra time provided was earmarked for a specific purpose; the assumption has been made that much of it was wasted . . . . Students in the experimental program made academic gains, but statistical analysis failed to reveal sufficient gains to uphold the hypothesis that the Cato-Meridian Extended

33. Witherspoon, Ralph L., *Effect of Trimester School Operation on the Achievement and Adjustment of Kindergarten and First through Third Grade Children* (Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, 1968), p. 23.
34. Thomas, *Setting the Stage for Lengthened School Year Programs,* p. 15.

School Year Plan could ultimately reduce school costs (by a reduction in student enrollment via acceleration) . . . The most significant gains were made in the lowest ability (IQ) groups. This supports the findings in other extended school year programs that slow learners or disadvantaged children benefit educationally when placed in a well-structured extended school year program."[35]

1965 -- In 1965, experimental summer schools following the New York Modified Summer School Plan were established at Syosset and Hornell, New York, and at the School of Human Resources, a New York school for physically handicapped children. Students who took courses in these summer schools were compared with matched groups of students who took the same courses during the regular school year. The achievement of the summer students (as measured by teachers' grades, standardized tests, and scores on Regents' Examinations) was equal to or higher than that of the students who took the courses during the fall or spring. There were no apparent problems with health or attendance, and parental reaction to the summer program was favorable. Furthermore, cost analyses showed that courses offered during the summer session cost less than similar courses during the regular school year.

1968 -- A 220-day quadrimester program is currently in operation at Park Elementary School in Hayward, California. Children attend classes for four ten-week quarters, with a three-week vacation after each quarter. The plan is being tried on an experimental basis and is financed by a Title III, ESEA, grant. Detailed information about the experiment, which was begun in fall of 1968 and will last for at least two years, is not yet available.

1968 -- In Metropolitan Atlanta, Georgia, a modified four-quarter plan was initiated in September 1968. The school year is divided into four quarters of approximately equal length (the summer quarter is somewhat shorter, but summer class periods have been lengthened). During the first year, all students are required to attend the first three quarters. The fourth quarter will be optional, and students who attend it may then choose which two of the next three quarters they wish to attend. Students may also accelerate by attending all four quarters. The curriculum has been revised so that all subject areas are organized into independent quarter courses, and the primary objective of the program is improvement of educational opportunity rather than economy. At the time of this writing, however, it was not certain that funding would be available for the summer quarter. If students must pay tuition to attend the summer quarter, this will obviously alter the nature of the experiment considerably.

1968 -- As of September 1968, a trimester plan is being piloted at San Jacinto High School in Houston, Texas. The school year consists of three unequal terms; two 18-week terms from September to May, and a twelve-week summer term during which a student can earn 2½ credits toward graduation. Each student attends any two of the three terms in each academic year (September through August). A student may elect to attend all three trimesters; if he does so, however, he must pay tuition for the

35. *Ibid.*, p. 24-25

Appendix B

time exceeding the 175 days of tuition-free schooling provided by the state.[36]

1969 -- The Valley View School District in Lockport, Illinois, intends to initiate a staggered attendance plan in June, 1970. The plan, designated the Valley View 45-15 Plan, divides the student enrollment into four groups. The first group will begin classes on June 30. The second group will begin 15 days later, the third group 15 days after the second, and so on. Each group will attend classes for 45 days and then have a 15-day vacation. Four such cycles per calendar year will give each student 180 class days. At any one time, only three of the four groups will be in school, with the fourth group on vacation. Legislation to enable this experiment is currently being considered.

36. Houston Independent School District, *Trimester* (Houston, Texas: Houston Independent School District, 1968), p. 2, 8.